

**Life after Loss: A Theory-Based Investigation into the Impact of  
Bereavement by Suicide or Other Causes on Adolescents in Scotland**

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A thesis submitted in partial fulfilment for the degree of

Doctor in Philosophy in the subject of Psychology

### **Declaration of Authenticity**

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### List of Publications Arising from this Thesis

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### List of Common Abbreviations

3ST	Three-Step Theory of Suicide
ANOVA	Analysis of Variance
BPD	Borderline Personality Disorder
CASE	Child & Adolescent Self-Harm in Europe [Study]
CaTS	Card Sort Task for Self-Harm
CI	Confidence Interval
DPM	Dual Process Model
DSH	Deliberate Self-Harm
DSM	Diagnostic and Statistical Manual of Mental Disorders
GAD-7	Generalized Anxiety Disorder Scale 7-item
HADS	Hospital Anxiety and Depression Scale
ICD	International Classification of Diseases
IMV-Model	Integrated Motivational-Volitional Model
IPA	Interpretative Phenomenological Analysis
IPG-C	Inventory of Prolonged Grief-Children
IPTS	Interpersonal Theory of Suicide
LEC	Life Events Checklist
M	Mean
MM	Motivational Moderator
MSPSS	Multidimensional Scale of Perceived Social Support
NICE	National Institute of Clinical Excellence
NOS	Newcastle-Ottawa Scale
NSSI	Non-Suicidal Self-Injury

PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PTSD	Post-Traumatic Stress Disorder
SD	Standard Deviation
SES	Socioeconomic Status
SITBI	Self-Injurious Thoughts and Behaviours Interview
SMFQ	Short Mood and Feelings Questionnaire
SOSS	Stigma of Suicide Scale
SPSS	Statistical Package for the Social Sciences
SSHTB	Suicidal or Self-Harming Thoughts and Behaviours
T1	Time 1 [baseline data]
T2	Time 2 [follow-up data]
TSM	Threat to Self Moderator
VM	Volitional Moderator
WHO	World Health Organisation

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## Abstract

Suicide is a leading cause of preventable death among adolescents worldwide, and engagement in self-harm, which is common among young people in Scotland, is a strong predictor of completed suicide. Research also suggests that knowing somebody who self-harms or has died by suicide may increase propensity to self-harm, although the specific impact of experiencing a suicide loss compared to other deaths on adolescents is yet to be established. Furthermore, how this impact compares to that for other deaths has also remained unclear. Theoretically informed work is crucial to advance the field of suicidology, and this can be achieved through testing and refinement of existing models. The Integrated Motivational-Volitional (IMV) model of suicidal behaviour (O'Connor, 2011; O'Connor & Kirtley, 2018) makes predictions about the factors that differentiate those who think about suicide from those who engage in suicidal behaviours, and as a relatively new addition to the field of suicidology, requires further testing with diverse populations and age groups. Guided by predictions from the IMV model, this mixed methods thesis set out to explore the experiences of adolescents who have been bereaved by suicide or other deaths, and investigate factors related to the development of adverse outcomes including suicidal or self-harming thoughts and behaviours.

Chapter 1 provides a background review of the literature on suicide and self-harm among adolescents, and explores the importance of applying theoretical frameworks to understanding behaviours. The next introductory chapter (Chapter 2) examines bereavement more closely, and details how and why adolescents' experiences of loss, and specifically suicide loss, may contribute to increased risk of harm.

Chapter 3 presents results from a systematic review of the evidence in this area, exploring adolescent experiences of suicide versus other losses and self-harm or suicidal

outcomes, and highlights the gaps in our knowledge that this PhD will address. Chapter 4 then provides an account of the methodological underpinnings of this thesis, explaining the development of each of the three empirical studies to follow.

Chapter 5 presents findings from a secondary analysis of data collected from Scottish schools, concerning experiences of death and self-harm outcomes (Study 1). A total of 2008 pupils took part (mean age = 15.4 years,  $SD = 0.8$ ). Findings showed that almost 8% of participants reported having been exposed to a suicide death, and a further 58% to a non-suicide death. Self-harm was also common among the sample (14% reporting self-harm behaviours and 6% ideation). Importantly, suicide loss was found to be significantly associated with outcomes, with experiences of exposure predicting self-harm. Bereavement more generally was not related to the outcomes measured.

Chapter 6 presents a prospective quantitative schools-based investigation carried out with pupils from secondary schools across the country ( $n = 185$  at baseline, mean age = 13.2 years,  $SD = 1.5$ ) (Study 2). This study investigated the relationship between bereavement and self-harm more closely, with a consideration of other theoretically informed variables. Findings showed similar rates of self-harm (21% behaviours and 24% ideation) as well as experiences of death (11% suicide exposure and 62% other deaths) among the sample as in Study 1. Furthermore, several factors were highlighted as being significant in predicting cross-sectional and/or longitudinal outcomes. These included factors such as maladaptive coping styles, lack of family social support, and holding stigmatising beliefs about suicide. On the other hand, experiences of any death or death by suicide specifically did not predict outcomes.

Chapter 7 describes a mixed methods study developed on the basis of the results of Study 2. The components were i) qualitative interviews, which aimed to explore lived experiences of life after someone important has died, and ii) a quantitative card sorting task

component to understand more about the factors leading to self-harm. This study offered detailed insights into how Scottish youth face a bereavement, analysing interview data from 13 individuals (mean age = 17.7 years,  $SD = 0.6$ ). A thematic analysis identified a varied range of reactions to loss, systems of support which can help or hinder the process of dealing with grief, the concept of agency and power, and gaining of new perspectives and personal growth – regardless of the specific cause of death experienced. Findings from the card sorting task also offered novel insights into how adolescents experience self-harm within the context of a bereavement.

This PhD offers important contributions to knowledge regarding how adolescents in Scotland understand and experience death as well as self-harm. Furthermore, this thesis contributes to the important task of testing and refining suicide theory, which is crucial for suicide prevention, intervention, and postvention efforts going forward. A consideration of the implications for research and theory, policy, and practice is provided, while acknowledging the strengths and challenges of these studies, and recommendations for future research.

## COVID-19 Impact Statement

In early 2020, recruitment for the third empirical study of this PhD (Chapter 7; mixed methods study) was underway. This study aimed to capture the lived experiences of adolescents who had experienced a bereavement by suicide and by other causes, in order to explore how experiences may differ depending on several factors including cause of death. The study aimed to expand on the previous quantitative findings of this PhD, which up to this point had focussed on comparing differently bereaved groups (notably, suicide versus other bereavements). A further aim of this third study was to explore how this group of young people experienced self-harm, using a novel Card Sorting Task for Self-Harm (CaTS), given that the focus of this thesis concerned self-harm thoughts or behaviours as an outcome of interest.

By March 2020, 13 individuals had already taken part in interviews (one of whom was bereaved by suicide; eight of whom had also provided data from the CaTS task), and several additional youth-based and bereavement organisations had agreed to assist with the research. Arrangements had been made, or were in the process of being made, to speak with adolescents in these settings about the research and invite them to take part. Recruitment was also ongoing through other channels at the time (such as online and public advertisements) in order to reach saturation in comparing experiences after different modes of bereavement.

At this point, COVID-19 had begun to spread worldwide, and ultimately resulted in the closure of the university campus as well as the cessation of face-to-face support within organisations. In line with government and university regulations, the decision was taken to stop recruitment at this stage, as in-person data collection would no longer be feasible and online recruitment was not deemed appropriate. As a result, no more data could be collected beyond these 13 individuals who had already taken part.

It was the initial intention of the study to recruit a sufficient number of adolescents who had been bereaved by different causes of death, including suicide, to compare how experiences might differ based on cause of death. Further, the original plan had been to gather sufficient CaTS data to enable statistical analyses of selected card frequencies (e.g., using lag sequential analysis, as guided by previous research using this activity).

However, because of the limited number of participants recruited by this point (e.g., only one participant reflected on a suicide death as their main bereavement), the analytical plan for the study had to be revised. The qualitative analysis of interview data instead focused on the experience of loss more generally, providing important insights into how adolescents face any bereavement, without attempting comparisons between suicide and other deaths. Descriptive statistics were instead provided for the CaTS data, and the selected card frequencies were interpreted in terms of their relations with the overall themes from the interviews, and wider PhD findings. In sum, while these data proved immensely valuable to advancing our understanding of the experiences of bereaved adolescents in Scotland, COVID-19 nevertheless shaped the way the data were interpreted and the overall story which could be told through this PhD.

## **Chapter 1 Introduction: Suicide and Self-Harm in Adolescence**

This chapter provides an overview of the field of adolescent self-harm and suicide, arguing that self-injurious behaviours among young people are a pressing issue which deserves empirical attention, particularly grounded within the context of theoretical models. The chapter begins with a clarification of nomenclature used in the field and within this thesis, and is followed by a description of the risk factors for self-harm, and how these are incorporated within prominent theoretical models. An overview of the main theories of suicide is presented, identifying the key psychological theories in the field, and a detailed explanation of a recent psychological framework which underpins this thesis is provided. Evidence which offers support for the propositions of this framework is reviewed, with a focus on existing adolescent studies in the field, thus justifying the focus of this thesis on the model. Finally, this introductory chapter argues that the model has relevance to understanding the factors related to the transition from thoughts to engagement in self-harm among young people, and therefore warrants further development in order to advance suicide prevention going forward. The second introductory chapter which follows (Chapter 2) examines the relationship between bereavement and self-harm, providing the context to understand the overarching aims and objectives of this thesis.

### **1.1 General Overview of Suicide and Self-Harm**

Suicide is a major public health problem, with around 800,000 individuals dying by suicide worldwide every year (Naghavi, 2019; World Health Organization, 2019), equating to around one person every 40 seconds (World Health Organization, 2019). It is also the second leading cause of death among 15-29 year olds globally. In Scotland, 805 people took their own lives in the most recent data from 2020, showing a decrease of 3.36% compared to the

previous year (Scottish Public Health Observatory, 2021). These latest data shows that suicide is more common among males (comprising roughly three fourths of all suicides), and among those in more deprived areas of the country. These statistics also reflect a high rate of young people dying by suicide. The highest rate among 15-24 year olds in Scotland since 2002 was seen in the previous year's data from 2019 (17.5 per 100,000 population, higher than the European age-sex-standardised rate of 15.5 that year). In the most recent data, a slight decrease was shown, with 91 individuals within this age range taking their own lives, corresponding to a rate of 14.6 per 100,000 population, representing a decrease of 17% from the previous year. Despite this positive trend, there is still much more needed to be done to reduce the incidence of suicide among young people (Scottish Public Health Observatory, 2021). Furthermore, while there is currently no consistent evidence of a rise in suicides as a result of the COVID-19 pandemic, early findings show an increase in community distress, lowered hospitalisations for suicidal behaviour and increased suicidal ideation among people with COVID-19 (John et al., 2020). Data specifically from Scotland suggest there was a rise in suicides in the third quarter of 2020, although it is not possible to state with certainty if the suicide rate that year differed significantly from the average rate pre-pandemic (between 2015-2019; Public Health Scotland, 2021). Research is ongoing and it is too early to state the overall effect of the pandemic on suicide rates, particularly among young people, but evidence from previous infectious disease-related public health emergencies supports an association between epidemics and suicide-related outcomes (Zortea et al., 2020). This suggests that suicide has and continues to be an urgent public health issue which demands concerted action.

For every person who takes their own life, many more individuals attempt suicide or self-harm, and even more will have thoughts about it (Hawton, Saunders, et al., 2012). It is estimated that there are at least 20 attempts for every suicide death (World Health

Organization, 2014). Data from the World Health Organisation (WHO) found that the 12-month prevalence of suicidal ideation, plans, and attempts ranged from 2-2.1%, 0.6-0.7%, and 0.3-0.4%, respectively, with data from over 100,000 adults from across 21 countries (Borges et al., 2010). Similarly, cross-national research suggests that as many as 9.2% of individuals report lifetime prevalence of suicidal ideation, 3.1% of suicide plans, and 2.7% of attempts across 17 different countries (Nock et al., 2008). A major predictor of eventual completed suicide is self-harm (Hawton, Saunders, et al., 2012), and research has shown that half of young people who take their own lives had a history of self-harm (University of Manchester, 2017). Suicide and self-harm have a devastating impact on individuals, their loved ones and communities as a whole, and there is thus urgency in better understanding and addressing the reasons for why so many young people consider ending their own lives.

## **1.2 Nomenclature**

In order to clarify the language used in this thesis, it is important to understand the debate around terminology which has persisted in the field over time and across countries. Employing a common set of terms is crucial for clinicians, researchers, politicians, policy makers and wider communities with an interest in understanding, and ultimately reducing, suicide (Silverman et al., 2007a; Silverman & De Leo, 2016), and difficulties arise where inconsistent terminology is used. Varied language can lead to mixed interpretations and comparisons of work in this area. This can be problematic in relation to official death certifications and mortality statistics, clinicians discussing patients at risk, or researchers studying the nature and course of such behaviours (De Leo et al., 2006; O'Carroll et al., 1996; Silverman & De Leo, 2016). Variability exists across countries and cultures (Goodfellow et al., 2019), and ultimately hinders the measurement and understanding of suicide and self-

harm. The next sections will identify the different terminology used in relation to self-harm and suicide and justifies why the terms used within this thesis have been selected.

### **1.2.1 Suicide**

Definitions of suicide vary depending on cultural context and theoretical inclinations, but generally cover: the outcomes of the behaviour, agency, intention to die or stop living, and the consciousness or awareness of the consequences of the behaviour (De Leo et al., 2006; Goodfellow et al., 2019). The history and development of nomenclature and classification systems in relation to suicide is detailed elsewhere (e.g., De Leo et al., 2006; Giner et al., 2016; Goodfellow et al., 2018; O'Carroll et al., 1996; Silverman et al., 2007a); however, a notable development was the publication of operational criteria to assist coroners in determining deaths by suicide. The Centers for Disease Control published their Operational Criteria (Rosenberg et al., 1988), in which *suicide* was defined as a death which was self-inflicted, and where the person intended to kill themselves or wished to die. Such criteria allowed for some clarity and consistency in the recording of suicides, although mortality data remain imperfect given variations in how the criteria are applied to ambiguous cases, the required standard of proof in different places, and the level of investigation of a potential suicide (Silverman & De Leo, 2016). Furthermore, the wider implications of recording self-inflicted deaths may influence such decisions, including societal and religious stigma (sometimes affecting burial practices), the illegality of the act in some countries (and associated legal complications surrounding insurance claims), or perceptions of guilt and shame among those left behind (De Leo et al., 2006; Silverman & De Leo, 2016). This suggests that suicide figures are likely to be under-reported (as supported by the literature; Pritchard & Hansen, 2015; Snowdon & Choi, 2020), and as a consequence, the extent of suicide and its reach may be overlooked.

### 1.2.1.1 Refinement of the nomenclature

Refinement of the nomenclature by O'Carroll et al. (1996) and Silverman et al. (2007a, 2007b) incorporated terms to reflect self-injury with or without intent to die, and thoughts of suicide (ideations). The issue of suicidal intent has been the focus of considerable debate. The WHO defines *suicide* as “the act of deliberately killing oneself”, while a *suicide attempt* is “any non-fatal suicidal behaviour and refers to intentional self-inflicted poisoning, injury or self-harm which may or may not have a fatal intent or outcome” (World Health Organization, 2014, p. 1212). This latter definition includes acts of self-harm irrespective of motive or intent to die. They also suggest an overarching term of *suicidal behaviour* to consider the range of thoughts and behaviours related to self-harm and suicide, from ideations, self-harm irrespective of motive, suicide attempts, and suicide deaths (World Health Organization, 2014). Several other terms and definitions have been proposed (Goodfellow et al., 2019; Silverman & De Leo, 2016), with little consensus as to what should be included or excluded to accurately capture behaviours related to suicide and self-harm. A major issue in the debate is how to define non-fatal cases of self-injury.

### 1.2.2 Non-Suicidal Self-Injury and Self-Harm

Approaches to defining self-injury differ particularly between North America and Europe/Australia (Muehlenkamp et al., 2012). In Canada and the United States, the term *non-suicidal self-injury* (NSSI) refers to the “direct, deliberate destruction of one’s own body tissue in the absence of intent to die” (Butler & Malone, 2013, p. 324). This includes cutting, burning, hitting, skin picking, and biting, and specifically excludes overdose or self-poisoning regardless of a person’s intent. It is assumed that individuals who engage in NSSI behaviours experience significant tension, anxiety, distress, or depersonalisation preceding the self-injury, which they are unable to escape from or control (Muehlenkamp, 2005).

Consequently, they engage in NSSI to bring about some other outcome or change, such as feelings of relief or control. In this way, the purpose of the behaviour is assumed to differ from that of suicidal behaviours, where the person desires to stop their suffering and end their life (Butler & Malone, 2013).

Until recently, NSSI was seen primarily as a symptom of psychiatric disorders, namely borderline personality disorder (BPD; Gratz et al., 2015), as well as developmental disabilities or eating disorders (Peterson et al., 2008). However, it was recognised that many individuals injure themselves without having a psychiatric diagnosis, so an alternative conceptualisation was needed. Arguments have been made that NSSI should be a distinct category within the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), particularly to distinguish it from BPD symptoms and improve clinical care through more informed risk assessments and treatment (Butler & Malone, 2013; Muehlenkamp, 2005; Zetterqvist, 2015). This resulted in its inclusion in the DSM-5 as a condition requiring further study (American Psychiatric Association, 2013), although debate persists around the specific criteria to be included (Hooley et al., 2020), especially considering the strict exclusion of self-poisoning as a method of NSSI.

Proponents of the term *NSSI* argue that, while it is undeniably related to suicide, given that both share common risk factors, and NSSI frequently precedes a suicide attempt (Nic an Fhaili et al., 2016; Zetterqvist, 2015), it also differs in key areas which warrant conceptual distinction. As well as lacking intent to die, it is assumed that people who engage in NSSI do so as a maladaptive way of coping with difficult circumstances in order to continue living. On the other hand, suicide attempts serve as a means to escape and end the difficult circumstances of life (Butler & Malone, 2013). Research has also identified differences between people who report NSSI and attempt suicide in terms of the severity or lethality of methods, frequency of behaviours, number of methods used, cognitions, and reactions to the

behaviour (Muehlenkamp & Kerr, 2010). Researchers have noted the complexity of the relationship between NSSI and suicide attempts (Zetterqvist, 2015), and proponents of the term recognise that NSSI can co-occur with suicidal self-injury, even within the same individual (Muehlenkamp et al., 2012). Work in this area is still in its infancy, but necessary given the inclusion of NSSI disorder as a separate condition in need of further study in the latest DSM-5 (Zetterqvist, 2015).

In contrast, European and Australian researchers favour the term *self-harm* to describe any self-injurious behaviours which do not result in death, irrespective of one's intent to die. This concept developed from the term *parasuicide* (Kreitman, 1969), as used in the large-scale WHO/EURO Multicentre Study on Parasuicide (De Leo et al., 2006; Schmidtke et al., 1996), and later *deliberate self-harm* (DSH; e.g., Hawton, Hall, et al., 2003). The latter has been largely replaced with "self-harm" due to the judgemental insinuation of self-harm being a deliberate choice (Silverman et al., 2007b), as well as arguments that intention is not always ascertainable or clear (Kapur et al., 2013). Indeed, research suggests that the issue of intent is not necessarily dichotomous. Many individuals report varying degrees of suicidal intent (Kapur et al., 2013). There may also be a degree of ambivalence about dying, as shown in past research (Hawton et al., 1982). Furthermore, there is evidence that individuals may engage in what would be considered NSSI behaviours while simultaneously experiencing suicidal ideation (Klonsky, 2011). Given the considerable overlap between self-harm and suicidality, it has been suggested that these behaviours lie on a continuum, and it is not constructive to differentiate non-suicidal from suicidal self-harm (Giner et al., 2016; Kapur et al., 2013). Some research in Europe has, however, differentiated self-harm with and without intent to die (e.g., Hargus et al., 2009) to allow for valid comparisons with the extant international literature.

Proponents of the European approach argue that much of the work on *NSSI* has taken place in North America, mainly with samples of young people, and few large-scale longitudinal studies exist (Kapur et al., 2013). Research has also shown stronger associations between hospital-treated self-harm and future suicide than self-poisoning and suicide (Hawton, Bergen, et al., 2012), the latter of which is not considered *NSSI*. In addition, individuals who poison themselves do not always report intention to die, despite the behaviour not being considered *NSSI* (Kapur et al., 2013). Motives for self-harm may be varied, which challenges the assumption that *NSSI* reflects a coping mechanism while suicide attempts are always a means to stop living. The Child & Adolescent Self-Harm in Europe (CASE) study, which investigated self-harm among more than 30,000 young people across Europe and Australia, reported that multiple motives for self-harm are often cited simultaneously (Madge et al., 2008). These may include wanting to die as well as a mechanism to deal with distress. A more recent study by Rasmussen et al. (2016) found that over half of young people who self-harmed reported more than one motive, with the most frequently cited motive being the desire to get relief from a terrible state of mind. Finally, it has been shown that methods of self-harm can vary over time and may involve switching between methods considered to be *NSSI* and self-poisoning. For instance, in an English hospital-based sample, one third of patients who repeat self-harmed had switched methods over the study period (Lilley et al., 2008).

### ***1.2.3 Definitions for this Thesis***

The debate around language is ongoing, and the terminology will continue to evolve as research in the field advances. There has also been a drive towards using less stigmatising and insensitive language around suicide, moving away from terms such as “commit” given its connotations with criminality, or “failed” suicide attempts (Hargus et al., 2009). This is

further reflected in media guidelines around the reporting of suicides (e.g., Independent Press Standards Organisation, 2020; Samaritans, 2020). Currently in the UK, national clinical guidelines set by the National Institute of Clinical Excellence (NICE) favour the term *self-harm* to refer to self-injurious behaviours or self-poisoning, regardless of whether suicidal intent has been ascertained (NICE, 2013). It specifically excludes accidental injury, body modification, starvation as a result of eating disorders, overconsumption of food, or use of alcohol or recreational drugs. In a similar manner, the CASE study definition of self-harm refers to behaviours irrespective of intention (Hawton et al., 2006), and has been employed in similar research with Scottish adolescent samples (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009). This approach is beneficial as it recognises the complexities of determining suicidal intent as well as a person's potential ambivalence.

Given the context of this research, the present thesis will adopt this definition of *self-harm*, considering it to signify any form of self-injurious behaviour regardless of intent. Where appropriate, *suicide attempts* or *suicidal behaviours* will be used to describe self-harm with at least some evidence of intent to die (as per De Leo et al., 2021; O'Connor et al., 2016), and the term *suicidality* will cover a range of behaviours which relate to thoughts or actions based around a wish to die (as described by Silverman et al., 2007a). It is acknowledged that use of the term *suicidality* is not always common in the literature, given that it covers a wide range of thoughts and behaviours, and thus may result in a lack of clarity when discussing associated thoughts or acts. *Suicidal ideation* or *self-harm ideation* will be used to describe any thoughts related to suicide or self-harm with or without intent to die, respectively. This will allow for valid comparisons with previous literature in this area, and interpretations of findings relevant to the current context. Differing terminology may be used at times when describing the wider literature to reflect the language used by other authors, or to reflect the terminology of the measures chosen for the empirical studies of this thesis (e.g.,

one of the scales employed in Studies 2 and 3 assessed thoughts of NSSI). At times, the phrase *suicidal or self-harming thoughts and behaviours*, or SSHTBs, will be used for brevity to describe the umbrella of thoughts and behaviours which relate to this topic, and *ideation* and *enactment* are also be used as synonyms for thoughts and behaviours. Definitions surrounding the term *adolescence* are provided in Section 1.3 below.

### **1.3 Conceptualising Adolescence Within the Study of Self-Harm**

Adolescence is characterised by a period of significant change. The term *adolescence* has been defined in many ways, including reference to chronological age, biological changes, social transitions, and cognitive development (Hawton, Saunders, et al., 2012). This period has also been described in relation to the status of being a ‘young person’ within society, transitioning into new roles within schools or work, families, criminal justice systems, and other social institutions (Wyn & White, 1997). It may be considered a time of increased independence and identity formation, and this is reflected in prominent theories around identity development. For instance, Erikson (1995) concentrates on the importance of social roles and dynamics, proposing adolescence as a period of identity versus role confusion preceding adulthood.

Given the varying conceptualisations of *adolescence*, data from adolescent studies may include individuals of a wide range of ages, including those up to 25 years, depending on study definitions. The WHO (2020) considers adolescence to span from 10-19 years of age, divided into early (10-13 years), middle (14-16 years), and late (17-19 years) stages. The United Nations (2020) refers to people between 15-24 years old as *youth*, and the term *young people* has been used to discuss both adolescents and youth (World Health Organization, 2014). Clinical definitions of adolescence define this life period as 10-24 years, which is said

to reflect biological growth and social role transitions of this phase in life (Sawyer et al., 2018).

In the field of suicide and self-harm, studies on this period of life generally focus on people aged 12 to 18 (e.g., Bilsen, 2018; Nock et al., 2013), given the associations with pubertal and developmental stages (Hawton, Saunders, et al., 2012; Patton et al., 2007). Suicide is rarely an outcome in under 15 year olds, and often not recorded in national statistics for persons under the age of 10 (Hawton, Saunders, et al., 2012; Office for National Statistics, 2020), owing to low base rates and difficulty determining intent in those younger than 10 (Naghavi, 2019). For the purposes of this thesis, a focus will be given to individuals between 12 and 18 years of age. This age range was selected to allow for comparisons with the wider literature on adolescence and within the field of suicide and self-harm. For ease of reading, at times, the term “young people/person” or “youth” may also be used interchangeably with “adolescent” to refer to individuals within this given age range.

### ***1.3.1 Prevalence of Suicide and Self-Harm Among Adolescents***

Kolves and De Leo (2016) found that between 2000-2009, the average suicide rate among 15-19 year olds across 81 countries was 9.5 per 100,000 for males and 4.19 for females, and the European rate during this period was 10.93 per 100,000 for males and 3.34 for females. Roh et al. (2018) looked at suicide rates among 29 OECD countries, demonstrating that the United Kingdom had a relatively low suicide rate compared to the average rate in 2014, and further, late adolescence (defined as 15-19 vs 10-14 years) and male sex were significant risk factors for suicide.

As discussed previously, data specifically from Scotland shows that suicide rates among 15-24 year olds were at their highest since 2002 in the year 2019 (17.5 per 100,000 individuals) (Scottish Public Health Observatory, 2020b), and 91 individuals within this age

bracket took their own lives in 2020 (Scottish Public Health Observatory, 2021). Prevalence rates of self-harm are more difficult to ascertain, given that much of the behaviour takes place in privacy, without presentation to clinical settings. Rates are therefore likely to be much higher than those recorded by health services (Geulayov et al., 2018). Nevertheless, studies on self-harm in the community, outlined below, suggest that it is very common among young people (Muehlenkamp et al., 2012).

The CASE Study, based in seven countries (Belgium, England, Hungary, Ireland, the Netherlands, Norway, and Australia), reported an 8.9% incidence rate of self-harm in female adolescents, and 2.6% incidence in male adolescents over a one-year period (Madge et al., 2008). Lifetime prevalence rates were also higher for females (13.5%) than males (4.3%), and over half of study participants reported multiple events of self-harm, suggesting repetition of self-harm is common among adolescents. In another large-scale study of European adolescents aged 15-16 years across 17 countries, lifetime suicide attempts ranged from 4.1% to 23.5% (median = 10.5%), and self-harm thoughts from 15% to 43.8%, across both sexes (median = 30.8%; Kokkevi et al., 2012). Similarly in the World Mental Health Surveys, one third of first year college students from 19 countries across the world (mean age = 19.3,  $SD = 0.6$ ) reported lifetime prevalence of any suicidal thoughts or behaviours (14.8% ideation, 13.6% plans, 4.3% attempts), while 17.2% reported prevalence over the past 12 months (8.4% ideation, 7.8% plans, and 1.0% attempts) (Bruffaerts et al., 2019). Comparable rates have been reported in the United States (Boeninger et al., 2010; Nock et al., 2013) and Australia (Patton et al., 2007). Jacobson and Gould (2007) reviewed studies on the epidemiology of NSSI and found that somewhere between 13% and 23.2% of adolescents had engaged in NSSI at some point in their lives. In another systematic review, Evans et al. (2005) found that the mean proportion of adolescents who reported a previous suicide attempt

across 128 studies (where a majority of participants were between 12-20 years old) was 9.7%, and 29.9% reported lifetime thoughts of suicide.

Within Scotland, there have been relatively few studies looking at community-based self-harm. Existing research suggests that somewhere between 12.2% to 22.8% of secondary school-aged pupils report self-harm ideation, between 11.4% to 13.8 % report self-harm behaviours, and around 76.4% report no history of self-harm thoughts or behaviours (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009; Russell et al., 2018).

Differences between rates of self-harm ideation and suicidal ideation have also been reported in a cross-sectional survey by Quigley et al. (2017b), illustrating that 9.7% of males and 24.9% of females in Scottish high schools had thoughts of self-harm (17.7% overall), while 4.2% of males and 20.3% of females had thoughts of suicide (12.6% overall). This study also found that 9.3% of males and 15.7% of females (12.6% overall) had engaged in self-harm, and 3.3% and 4.7% had made a suicide attempt (4% overall), respectively. Longitudinal findings from O'Connor, Rasmussen, et al. (2009a) show that 6.2% of Scottish adolescents reported self-harm over a 6-month period, with 2.6% for first time and 3.6% repeat self-harm.

Self-harm is a major predictor of completed suicide among all age groups (Hawton, Saunders, et al., 2012), and reflects significant distress experienced by young people. Rates of adolescent self-harm seem to be increasing worldwide over recent decades (Griffin et al., 2018; Morgan et al., 2017; Tørmoen et al., 2020), though the reasons for this are not entirely clear. It may, in part, be due to increased pressures faced by young people, leading to greater risk taking behaviours including alcohol and drugs and social transmission of self-harm (Hawton, Saunders, et al., 2012), as well as increased rates of psychopathology (Morgan et al., 2017; Tørmoen et al., 2020), access to psychotropic medications (Cairns et al., 2019), and pressures from technology and social media (Morgan et al., 2017). This suggests that self-harm among adolescents is common and potentially on the rise, and a variety of factors may

contribute to this which warrant further investigation. This thesis will focus specifically within the Scottish context, given the need for further community-based studies on this topic.

### ***1.3.2 Adolescence as a Critical Period for Self-Harm***

In a cross-national study across 17 countries, Nock et al. (2008) found that 60% of transitions from ideation to plan and attempt happen within a year after suicidal ideation. Similarly in an adolescent sample of 13-18 year olds, the majority of transitions from ideation to plan or attempt occurred within the first year following onset of suicidal ideation, and suicidal ideation was shown to increase rapidly during adolescence (Nock et al., 2013). Further research shows that self-harm increases gradually after 12 years of age, coinciding with the onset of puberty, and continues to rise throughout adolescence (Hawton, Hall, et al., 2003; Hawton, Saunders, et al., 2012). This is particularly the case in girls, where the ratio of females to males can be as high as six to one among younger adolescents, and gender differences are especially apparent around 13-15 years of age (Hawton, Saunders, et al., 2012). This ratio tends to level off over time as self-harm becomes more common in boys and levels off in girls. Research with US and Australian secondary school pupils from 12-15 years showed that self-harm was related to pubertal stage; late puberty was associated with an over 4 times higher odds of self-harm after adjusting for age and school year (Patton et al., 2007). Depressive symptoms, alcohol use, and sexual activity were also significantly associated with rates of self-harm. In a longitudinal study of 11-19 year olds, Boeninger et al. (2010) showed that suicidal ideation and plans were more common in girls during mid-adolescence (declining rapidly by late adolescence), and for boys increased generally through late adolescence. Suicide attempts were similar for both sexes, increasing through mid-adolescence and then declining. Overall, these findings show the potential increase in suicidal

or self-harm behaviours which begin during this life period, and reflect a period of vulnerability which is worthy of research attention.

#### **1.4 Risk Factors for Suicide Across the Lifespan**

Developing an enhanced awareness of the risk factors related to the onset and maintenance of self-harm or suicidal behaviour is a key approach to predicting and ultimately preventing suicide. Risk factors are variables which increase the likelihood of outcomes such as suicide (Van Orden et al., 2010), while protective factors decrease the likelihood by promoting strength and resilience, particularly in times of vulnerability (Office of the Surgeon General (US), 2012). A broad range of factors have been associated with self-harm and suicide, which cover biological, social, psychological, psychiatric, and genetic domains. Risk factors commonly associated with adolescent experiences include: sex (males are more likely to die by suicide, females to self-harm), low socioeconomic status, childhood adversity including experiences of abuse, mental disorders (particularly depression and anxiety, personality disorders, and attention deficit hyperactivity disorder), sexual minority status, family or interpersonal difficulties, family history of mental illness, bullying, drug and alcohol use, smoking, low self-esteem, impulsivity, perfectionism, hopelessness, social isolation, and exposure to negative life events including bereavement (Bilsen, 2018; Hawton, Saunders, et al., 2012). Detailing the extensive range of factors which have been identified in the literature is beyond the scope of this thesis, and furthermore, examining individual factors in isolation is not helpful for predicting why so many people go on to take their own lives, and consequently, preventing this outcome. Suicide is ultimately the result of a complex combination of factors that span genetic, biological, psychological, and social/cultural domains (Hawton & van Heeringen, 2009; May & Klonsky, 2016; Ryan & Oquendo, 2020).

This complexity poses a challenge to research in this area. Efforts to predict and prevent suicide do not benefit from examining individual elements in isolation, as individual risk factors lack in sensitivity and specificity to identify those most at risk (Clarke et al., 2019). Indeed, in a meta-analysis of 50 years of research, Franklin et al. (2017) concluded that decades of research have not resulted in significant advancement in our ability to predict who is likely to engage in suicidal thoughts or behaviours, partly owing to this approach of measuring single risk factors rather than in combination (Franklin et al., 2017). Instead, the application of theory may allow for a more comprehensive understanding of the issue. Theoretical conceptualisations of self-harm and suicide acknowledge the complexity of factors that interact to bring about these outcomes, and thus provide a framework for studying and understanding the topic. The status of theory in the field has undergone significant developments in recent years, and further investigation continues to be needed.

#### **1.4.1 *The Need for Theory***

Theories provide a useful perspective to understand and approach complex topics. They provide structure and guide meaningful research and practice by ordering, connecting, and integrating empirical findings. Theories help consolidate what has been observed and what can be predicted regarding a phenomenon, and in this way, can be beneficial within the study of behaviour change (Willmott & Rundle-Thiele, 2021). In research, they help identify variables of interest for further investigation, and generate hypotheses based on empirical evidence rather than intuition (Michie & Prestwich, 2010). In practice, their application provides a grounding to develop and refine risk assessments, interventions, or health improvement programmes, and evaluate how and why these may be successful or not (U.S. Department of Health and Human Services, 2005). Interventions based on theory have been shown to be more effective than those lacking a theoretical base (Bluethmann et al., 2017;

Glanz & Bishop, 2010; Taylor et al., 2012). For this reason, rigorous empirical testing, and validation of theory (with different populations and under different conditions), is essential to advance knowledge and ultimately improve health outcomes.

It has been said that theory is fundamental to the development of treatment packages for suicidality, providing targets and frameworks to help guide these interventions (Wenzel & Beck, 2008). To this end, research on multifaceted issues like suicide is enhanced by the application of theory. A theory which identifies protective factors in addition to risk factors may be of particular value, as it provides opportunities for proactive suicide prevention for those who may become at risk (Brent, 2011). It is worth noting that theory may have limited value in predicting future behaviours (Klonsky, 2019), but this does not refute its potential utility in understanding and explaining complex events or actions.

Suicide research has come a long way since the earlier traditional theories in the field. Early sociological perspectives like that of Durkheim (1897/2002) focused on suicide at a societal level, suggesting that social structures predisposed individuals to suicide. His foundational Integration Theory argued that suicidal behaviour results from an imbalance between social integration and social regulation, where deficient or excessive integration or regulation was detrimental to the individual. Freud's (1917) psychodynamic approach argued that life and death instincts are in opposition with each other; the life drive deals with survival and pleasure while the death drive represents an unconscious desire to die in order to eliminate the tensions of life (Barzilay & Apter, 2014). From this perspective, suicide is viewed as the product of an internalised death wish, and can be considered aggression turned inward. Menninger (1938) expanded on this concept to suggest that physical and mental health rely on a fusion between life and death instincts in order to create a balanced state where the death instinct does not become overpowering. According to Menninger, suicide is the result of three wishes: to kill, to be killed, and to die. Despite the importance of these

early theories in advancing our understanding of suicide and sparking new research, these theories are not without limitations; most notably, adopting an overly narrow focus and being limited in their ability to distinguish who is and is not likely to engage in suicidal behaviours.

The more recent biomedical approach has dominated the field for some time, with its emphasis on biological, genetic and psychiatric determinants of suicide. Depletion of neurotransmitters, particularly serotonin (Bondy et al., 2006), as well as specific genes (Baldessarini & Hennen, 2004), have been implicated. With regards to psychiatric illness, a frequently cited finding is that a large majority of people – 90% – who die by suicide have a mental disorder (Bertolote & Fleischmann, 2002). A systematic review showed that between 47 and 74% of suicides were attributable to mental illness (Cavanagh et al., 2003), and a meta-analysis by Arsenault-Lapierre et al. (2004) showed that 87.3% of people who died by suicide had been diagnosed with a mental disorder. Depressive disorders are frequently implicated, as well as bipolar disorder, schizophrenia, personality disorders and substance abuse problems (Hawton & van Heeringen, 2009).

However, most people with a mental disorder do not go on to attempt suicide. Studies suggest that around 5% of people with mood disorders complete suicide (e.g., Isometsä, 2014), and the majority of people with a diagnosis of mental illness do not experience thoughts or actions related to suicide (O'Connor & Nock, 2014). Hjelmeland and Knizek (2017) also question the 90% statistic, suggesting that the methods used to ascertain evidence of mental illness, usually psychological autopsy studies, are methodologically flawed. Psychological autopsy involves interviewing bereaved people close to the deceased, and in conjunction with examining official records, making an assessment of the deceased person's health, personality, and social circumstances to understand why they died (Cavanagh et al., 2003). Such studies only uncover subjective speculations which are not a reliable account of what the deceased person may have felt or experienced (Hjelmeland & Knizek, 2017). The

disorders often assessed (primarily affective disorders, substance use disorders, and personality disorders) are difficult to ascertain by others, so judgements are not necessarily reliable. In addition, a causal relationship is often assumed between mental illness and suicide, which is clearly problematic.

A major drawback of the biomedical approach is that it lacks predictive utility; the presence or absence of mental illness (or individual biological/genetic factors) in itself is not useful for identifying who is likely to ideate about or attempt suicide, and does not explain why some individuals will go on to take their own lives (Prinstein, 2008). Furthermore, many of these factors (e.g., genetics) are unchangeable, and therefore offer limited avenues for prevention. Psychological models may instead offer some insight as to which individuals are more likely to go on to act on their thoughts, and identify potentially modifiable constructs to aid in suicide intervention and prevention (O'Connor & Nock, 2014).

#### **1.4.2 *Psychological Theories***

Among the earlier psychological theories was that of Shneidman (1987), who emphasised the role of intense psychological pain, or psychache. His Cubic Model of Suicide proposes that the combination of three components: press (pressure or stress), pain (psychache), and perturbation (emotional upset), can result in lethal outcomes when experienced at intolerable levels. An individual who experiences unbearable psychological pain wishes to seek relief from the pain, but once they have reached their individual threshold of tolerance, sees death as the only means of escape (Shneidman, 1993). Shneidman posits that in the majority of cases, this pain arises from a perception of thwarted psychological needs. These cover a range of basic needs including love (or acceptance or belonging), positive self-image and avoidance of shame, and meaningful relationships. The primary goal of suicide prevention therefore is to reduce psychological pain. While there is some empirical

support for this model (e.g., DeLisle & Holden, 2009; Pereira et al., 2010; Troister & Holden, 2010), it is not without criticism. Specifically, the lack of a clear definition of psychological pain, high correlations between psychache and other related constructs like depression and hopelessness, and low specificity, have been highlighted (Barzilay & Apter, 2014).

Baumeister (1990) proposed that suicide results from a desire to escape from an aversive situation and an unbearable state of mind. In his Escape from Self theory, he details six main steps to this process. First is a personal experience which falls short of high personal standards and expectations. In response, the person makes unfavourable internal attributions which can result in self-blame and low self-esteem. This leads to a state of high aversive self-awareness. As a result, the person sees themselves as inadequate, which creates a state of negative affect (particularly depression or anxiety). The individual responds by trying to escape through a process of cognitive deconstruction, where they reject or avoid engaging in meaningful thought and interpretations of their circumstances. When this fails to resolve their internal conflict, they may see a change in their mental state; the consequences of this include reduced inhibitions, which may result in a suicide attempt as a means to escape (Baumeister, 1990). Some support is available for the Escape from Self theory (e.g., Dean & Range, 1999; Hunter & O'Connor, 2003), though direct evidence is limited, in particular from clinical populations. A lack of specific hypotheses on the emergence of suicidal ideation and transitions between stages (Barzilay & Apter, 2014) as well as an overemphasis on a single motivation for suicide (O'Connor et al., 2016) are additional critiques of the theory.

Expanding on the idea of escape from self, Williams (2001) proposed that suicide results from perceptions of entrapment, which arise from feeling defeated or humiliated by circumstances, with no possibility of rescue. This theory draws on the work of Gilbert and Allan (1998) looking at depression, where they relate human behaviour to the concept of arrested flight in animals. Williams (2001) explains suicidal behaviour as a cry of pain in

response to an unbearable state of being. The importance of the concepts of defeat and entrapment have been noted in a number of studies (e.g., O'Connor, 2003; Rasmussen et al., 2010; Slade et al., 2014; Taylor et al., 2011). Diathesis-stress models such as arrested flight feature heavily in the literature, which suggest that the interaction between background vulnerability factors and triggering stress events provide the context for suicidal behaviour (Barzilay & Apter, 2014; Schotte & Clum, 1987).

### ***1.4.3 Ideation-to-Action Frameworks***

While many of these psychological theories have been important in stimulating research and knowledge, they tend to be narrow in focus and do not present a comprehensive picture of the multitude of factors which contribute to an individual attempting to self-harm or take their own life (O'Connor et al., 2016). More recent frameworks acknowledge that suicide is a complex phenomenon that results from a combination of biological, psychological, clinical, and sociocultural factors (O'Connor & Kirtley, 2018; O'Connor & Nock, 2014; Van Orden et al., 2010). A new generation of theories makes an important distinction between the development of suicidal thoughts and the emergence of behaviours. These 'ideation-to-action' frameworks (Klonsky & May, 2014) differentiate between factors which govern behavioural enactment and those which govern ideation or intention formation (Klonsky et al., 2017; May & Klonsky, 2016; O'Connor et al., 2016). This is important, as concerns have been raised that research often combines people who attempt and who ideate about (but not attempt) suicide, without seeking to understand the differences between these groups. This is significant, as research shows that the majority of people who think about suicide do not go on to make an attempt (Nock et al., 2008), and, therefore, the processes and predictors behind suicidal ideation and attempts are likely to be distinct (Klonsky et al., 2021). As a result, much of the research to date on risk factors for suicide may in fact be risk

factors for suicidal ideation, rather than behaviours (Klonsky et al., 2018; May & Klonsky, 2016). Given that many more people will have thoughts about suicide than who will attempt it, it is essential to understand the factors which differentiate these groups (May & Klonsky, 2016).

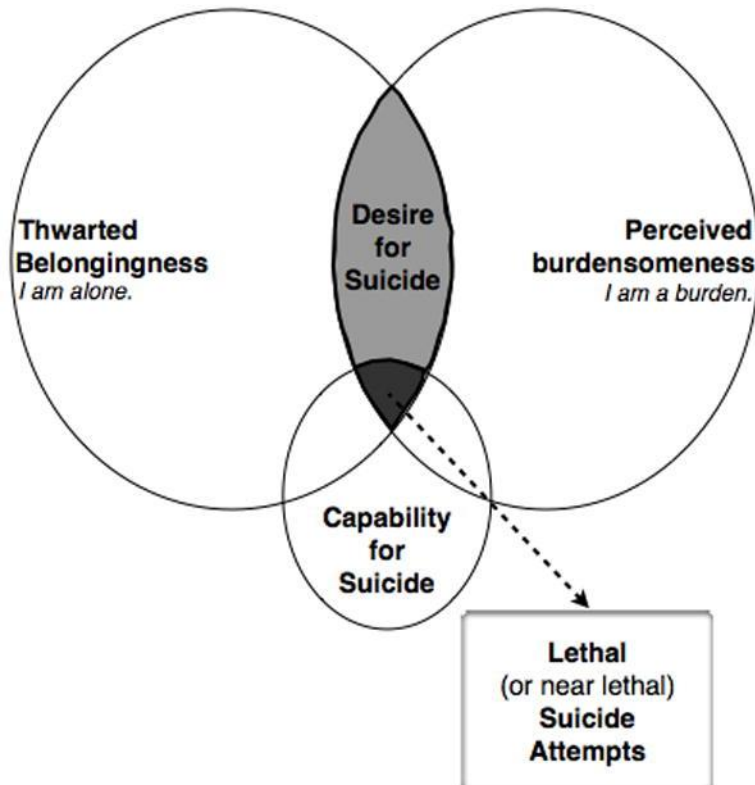
To advance future research, theoretical models should therefore account for factors related to the development of both ideation and enactment in order to comprehensively assess and understand suicide (Klonsky & May, 2014; Van Orden et al., 2010). The following sections provide an overview of three of the main ideation-to-action theories: the Interpersonal Theory (IPT; Joiner, 2005; Van Orden et al., 2010), the Three-Step Theory (3ST; Klonsky & May, 2015), and the Integrated Motivational-Volitional Model (O'Connor, 2011; O'Connor et al., 2016; O'Connor & Kirtley, 2018).

#### **1.4.3.1 Interpersonal Theory of Suicide.**

Joiner introduced his Interpersonal Theory of Suicide (Joiner, 2005; Van Orden et al., 2010), which posits that suicide is the result of three core components: perceived burdensomeness, thwarted belongingness, and capability for suicide (Figure 1.1). The simultaneous perception of being a burden on others, coupled with feelings of low belongingness (related to interpersonal loss, social connectedness or isolation, and poor social support, consistent with Durkheim's view) produces a desire for suicide (Van Orden et al., 2010). This is particularly the case when an individual feels hopeless about the situation. Through a process of repeated exposure and habituation to painful or provocative, fear-inducing situations, a person may acquire the capability for suicide, which comprises an increased tolerance for physical pain and reduced fear of death (Van Orden et al., 2010).

**Figure 1.1**

*The Interpersonal Theory of Suicide (Reproduced from Van Orden et al., 2010)*



Since its emergence, there has been substantial investigation into the key constructs underpinning the IPTS. Research has considered the role of life events like bereavement within the framework. In a cross-sectional study of 58 bereaved adolescents in the United States, Hill et al. (2019) suggested that grief reactions associated with the death of a loved one may heighten feelings of low belongingness and burdensomeness among young bereaved people, which in turn may predict suicidal ideation. They suggested that experiences of death may rupture social support networks, and coupled with grief reactions that accompany social isolation or withdrawal, can result in increased thwarted belongingness. The authors also proposed that self-blame surrounding the death (particularly where it was felt that the death was preventable), a reluctance to express grief so as not to add to the grief of others, or

avoidance of reminders of the loss, may lead young people to feel a burden on others. In testing this theory, the authors found evidence of an indirect effect of grief reactions on suicidal ideation via thwarted belongingness (but not perceived burdensomeness), suggesting that belongingness should be considered in the assessment of youth at risk of suicide. Others have suggested negative life events, such as exposure to the suicide of others, as a painful and provocative life event which contributes to acquired capability for suicide (Smith & Cukrowicz, 2010).

There have also been several reviews exploring whether different aspects of the theory have been supported across a range of populations. A meta-analysis of 122 distinct samples by Chu et al. (2017) indicated overall support for predictions of the theory; the individual model constructs were found to be related (albeit with weak-moderate relationships) to suicidal thoughts and behaviours. Importantly, the interaction between low belongingness and feelings of burdensomeness was positively associated with suicidal ideation, and the interaction between thwarted belongingness, perceived burdensomeness, and capability for suicide was positively associated with the number of past suicide attempts, with small effect sizes. It is worth noting that a majority of articles included in this review (92.3%) consisted of cross-sectional data, thus limiting conclusions on the predictive validity of the IPTS. Stewart et al. (2017) reviewed the validity of the IPTS in adolescent research, and found some support for the model, especially for the relationship between acquired capability and suicide attempt. However, this review utilised proxy variables as measures of IPTS constructs (e.g., loneliness as a proxy for thwarted belongingness). Furthermore, the proportion of prospective papers (5 of 17) was also low, thus not necessarily constituting the strongest evidence in testing of the IPTS.

On the other hand, Ma et al. (2016) found mixed evidence across the literature (which consisted of 66 studies, three of which were longitudinal) in relation to the applicability of the

IPTS to understanding suicide. The main effect of perceived burdensomeness on suicidal ideation was generally supported across a number of study populations; however, thwarted belongingness and acquired capability, and the interactions between the constructs, were generally less tested and yielded less consistent support. The authors question whether the model is as clearly defined or supported as previously believed, raising concerns about the predicted relationships (interactions) between constructs, and whether existing measures truly reflect these model components. Questions are also raised about whether the IPTS predictions are generalisable or apply only to a subset of individuals, and the possibility of alternative variables not accounted for in the model which may be central to distinguishing and predicting suicidal ideation and behaviours.

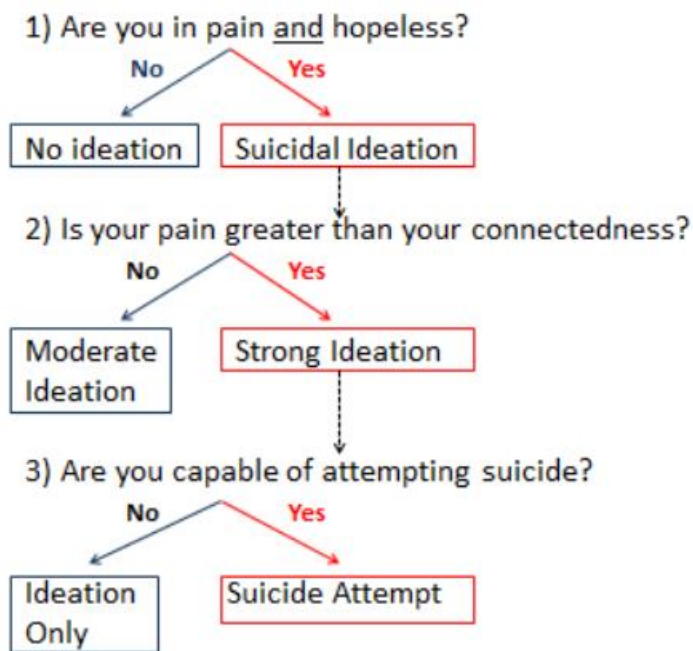
#### **1.4.3.2 Three-Step Theory.**

Klonsky and May (2015) more recently proposed their ideation-to-action framework of suicide. Their Three-Step Theory (Figure 1.2) asserts that suicidal ideation results from the combination of intense pain (often psychological or emotional but can be from diverse sources) in addition to a perception of hopelessness (about the future). When an individual feels a lack of connectedness (similar to Joiner's concepts of belongingness and burdensomeness), this may result in intense suicidal ideation. Klonsky and May recognise that other commonly cited risk factors, such as psychiatric disorders, states of mind, personality traits, temperaments or dispositions, and experiences (e.g., bereavement) come into play through their influence on the key constructs of pain, hopelessness, and/or connectedness (Klonsky et al., 2016). Finally, one's capacity for suicide is influenced by factors which may be dispositional (e.g., genetics), acquired (e.g., habituation to pain or death, as per Joiner's model), or practical (e.g., knowledge of and access to means of

suicide). This combination of strong suicidal ideation in addition to a capacity for suicide translates ideation into attempt (Klonsky & May, 2015).

**Figure 1.2**

*The Three-Step Theory (Reproduced from Klonsky & May, 2015)*



Being a recent model, evaluation of the 3ST is still ongoing, but to date includes data from online samples of adults (Klonsky & May, 2015), psychiatric inpatients (Tsai et al., 2020), and university student samples (Dhingra et al., 2019; Yang et al., 2019), showing the relevance of pain, hopelessness, and connectedness in suicidal ideation, and acquired capability in suicide attempts. Studies with adolescents have found that psychache, hopelessness, and escape were the most strongly endorsed motivations for suicide attempt among adolescents in psychiatric settings (May et al., 2016), more so than factors such as burdensomeness and low belongingness; this echoes findings from undergraduate students

and outpatient samples with a history of suicide attempt (May & Klonsky, 2013). Evidence testing the utility of the 3ST is still being gathered, and will help to pinpoint aspects of the framework which prove useful and/or which require further refinement.

### **1.5 Integrated Motivational-Volitional Model**

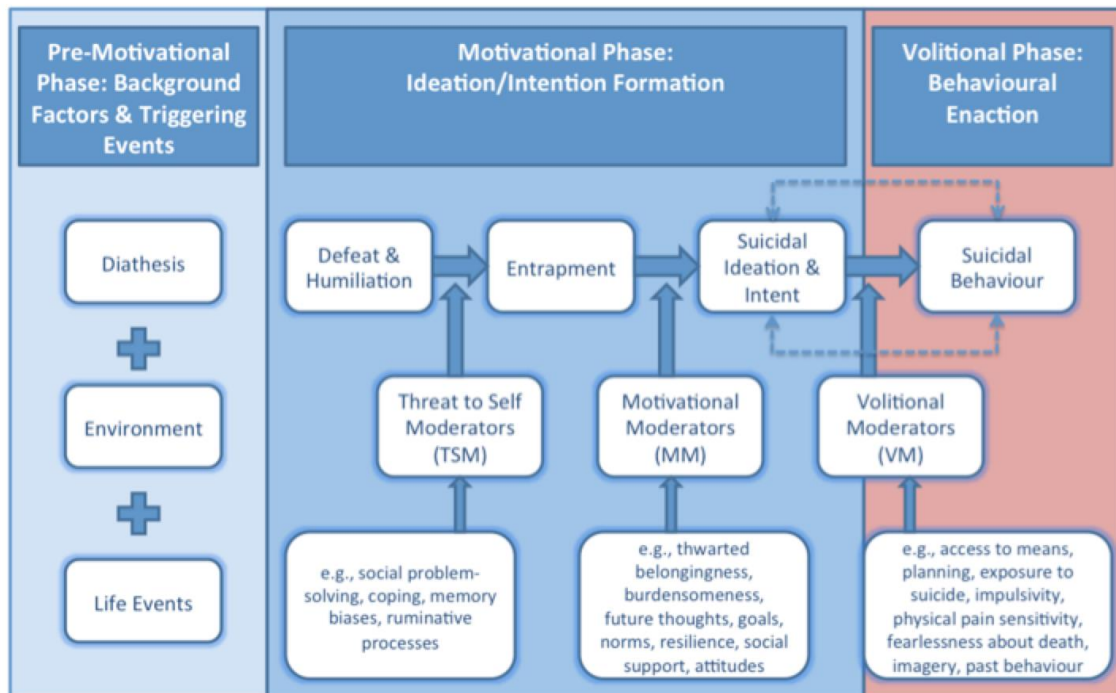
O'Connor (2011; updated and refined O'Connor et al., 2016; and by O'Connor & Kirtley, 2018) developed the Integrated Motivational-Volitional (IMV) model of suicidal behaviour to incorporate findings from previous research, and to address some of the weaknesses of previous models which did not differentiate ideation from enactment. The model (Figure 1.3) incorporates some concepts from other theories, including Joiner's IPTS and Klonsky and May's 3ST, to explain the pathways to engaging in suicidal thoughts and behaviours. Its proponents suggest it is applicable both to self-harm and suicidal thoughts and behaviours, irrespective of intent (O'Connor & Kirtley, 2018). This tripartite framework first sets an individual's broader psychosocial context for suicide (*pre-motivational phase*), then explains the formation of suicidal ideations or intention<sup>1</sup> (*motivational phase*), and finally accounts for the transition from suicidal thoughts to behaviours (*volitional phase*). Stage-specific moderators are theorised to moderate the transitions between stages.

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<sup>1</sup> As per O'Connor & Kirtley, 2018, the possible distinction between ideation and intent is recognised, but used interchangeably here given the dearth of research on this matter.

**Figure 1.3**

*The Integrated Motivational-Volitional (IMV) Model of Suicidal Behaviour (Reproduced from O'Connor & Kirtley, 2018)*



### 1.5.1 Pre-Motivational Phase

A notable strength of the IMV model over other frameworks is that it draws from several distinct theoretical perspectives (including concepts from other ideation-to-action models; see Section 1.5.3). The diathesis-stress model (Schotte & Clum, 1987) features in the pre-motivational phase, where individual vulnerabilities such as personality traits or environmental characteristics, combined with stressors (life events), elevate risk of suicidal ideation (O'Connor & Kirtley, 2018). This idea accounts for several findings from the literature, for example studies showing increased suicidality among people with high levels of perfectionism (O'Connor & Nock, 2014; Rasmussen et al., 2008; Smith et al., 2018), socioeconomic inequalities (Platt, 2016), and life adversities (Serafini et al., 2015). Exposure

to self-harm among family and friends (Hawton, Saunders, et al., 2012), as well family history of bereavement (Pitman et al., 2014), may impact vulnerability to self-harm, as theorised in this phase of the model.

### ***1.5.2 Motivational Phase***

Building from Williams' (2001) Cry of Pain theory, the model further posits that when an individual's background factors predispose them to suicidality, feelings of being defeated or humiliated by life's circumstances make them more likely to experience feelings of being trapped in an inescapable situation (O'Connor & Kirtley, 2018). The relationship between these key components is facilitated by Threat to Self Moderators (TSMs), such as rumination, coping styles, and memory biases, which may increase the likelihood of entrapment. This state of entrapment can then result in the formulation of thoughts of suicide, particularly when Motivational Moderators (MMs) are present. Here, Joiner's thwarted belongingness and burdensomeness concepts are recognised, as well as factors such as social support and resilience. Drawing from the Theory of Planned Behaviour (Ajzen, 1991), O'Connor and Kirtley (2018) suggest that the proximal predictor of future behaviour is one's intention or motivation to engage in the behaviour, and suicidal ideation is therefore the final stage of the motivational phase of the model.

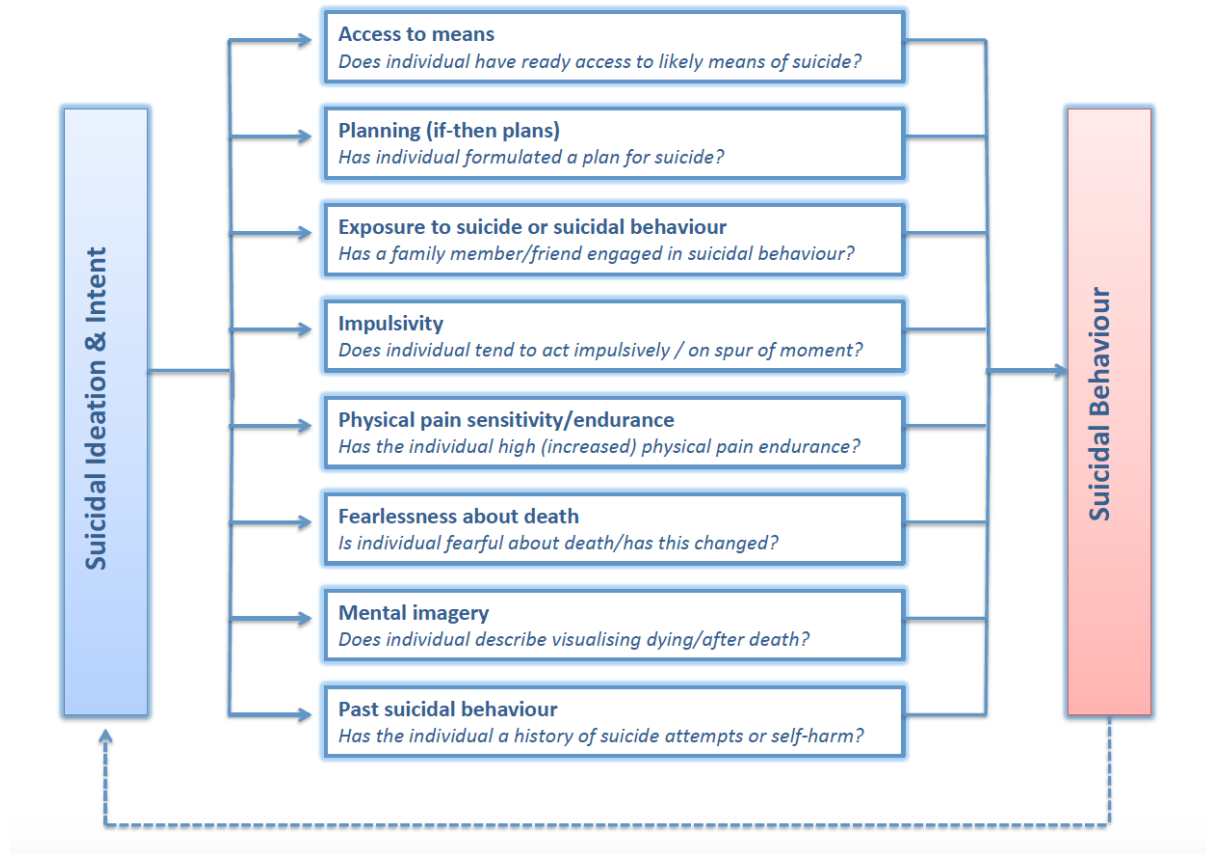
### ***1.5.3 Volitional Phase***

The volitional phase of the IMV model explains the shift from suicidal ideation to behaviours, with Volitional Moderators (VMs) being essential for this transition. Recently, O'Connor and Kirtley (2018) expanded on the original model, proposing eight key factors which represent the cyclical relationship between ideation and repeated attempts. These moderators (Figure 1.4) include acquired capability for suicide as recognised by the other

ideation-to-action models (Joiner, 2005; Klonsky & May, 2015; Van Orden et al., 2010), but also extend to other factors highlighted in the literature, such as impulsivity (Gvion & Apter, 2011; O'Connor & Nock, 2014) and access to means (Florentine & Crane, 2010; Hawton, Saunders, et al., 2012; O'Connor & Nock, 2014), for example. Exposure to the self-harm (Mars et al., 2019b; O'Connor et al., 2014) or suicidal behaviour (Pitman et al., 2014) of others has also been linked with increased likelihood of engaging in self-harm and thus is emphasised as a VM. This potential relationship has gained increasing interest over recent years, though there is a lack of evidence examining this relationship among adolescents. The literature in this area will be discussed in detail in Chapter 2, with a focus on the possible mechanisms underlying this relationship, and how this leads on to the overarching aims of the current thesis.

**Figure 1.4**

*Volitional Moderators Within the IMV Model (Reproduced from O'Connor & Kirtley, 2018)*



#### **1.5.4 IMV Model Testing with Adolescents**

The IMV model presents clear and testable hypotheses regarding the relationships among its constructs, and a number of studies to date have found evidence in support of its predictions, mainly with adult samples (e.g., Cleare et al., 2018; Dhingra et al., 2015, 2016; O'Connor & Portzky, 2018; O'Connor et al., 2013; Rasmussen et al., 2010; Wetherall et al., 2018). While its components may be applicable to adults, the model has not been extensively directly tested with adolescents, and further research is therefore needed in this regard.

O'Connor et al. (2012) investigated the differences between adolescents who think about self-harm and those who engage in self-harm in a schools-based sample of 5,604 young

people in Scotland and Northern Ireland, aged 15-16 years old. As expected, those in the ideation group (11.4% of the sample) and enactment group (12.2%) differed significantly from controls (with no history of thoughts/acts of self-harm; 76.4%) but not each other on pre-motivational phase and motivational phase variables. These included socially prescribed perfectionism, brooding, self-esteem, and optimism. Furthermore, the ideation group differed from controls and each other on volitional phase variables, namely self-harm among friends or family, descriptive norms (believing their friends or family engaged in self-harm), and impulsivity. Multivariate analyses indicated that female gender, having family or friends who self-harmed, and negative life stress remained significant in the final model, distinguishing between ideation and enactment groups. O'Connor et al. (2014) also reported that alcohol use, recent drug use, bullying, physical abuse, sexual abuse, family and friend self-harm, and self-esteem were associated with self-harm in girls, while bullying, exposure to self-harm of others, lack of exercise, sexual orientation worries, anxiety, and impulsivity were associated in boys in their Northern Ireland school sample.

In a separate analysis with Scottish data, O'Connor, Rasmussen, Miles, et al. (2009) found that self-harm among pupils (15-16 years old) was associated with several variables including: smoking, drug use, bullying, physical abuse, sexual orientation worries, serious problems with a boyfriend/girlfriend, self-harm by friends and family members, group norms, and anxiety. Slight differences were apparent between males and females, but nevertheless self-harm was found to be prevalent among participants (13.8% lifetime self-harm, of which 71% had engaged in it over the past year), and several variables that are implicated in the model were found to be associated with self-harm in this sample.

Hargus et al. (2009) examined the differences among adolescents in England aged 15-16 years, who belonged to one of four groups: those reporting no history of self-harm thoughts or actions, thoughts of self-harm only, engagement in self-harm with no intent to

die, or engagement in self-harm with intent to die. As suggested by the IMV model (although this study did not explicitly test the model), numerous factors distinguished those with no history of self-harm from the other groups (thoughts and actions). Differences were also apparent between people who experienced self-harm thoughts and those with self-harm behaviours, particularly exposure to the self-harm of others. Self-harm of a friend differentiated people with thoughts of self-harm from people who engaged in non-suicidal self-harm, and family self-harm differentiated those with self-harm thoughts from those with suicidal self-harm.

Despite cross-sectional studies precluding causal inference, few longitudinal studies exist which test IMV model predictors of self-harm among young people. Over a six-month period, O'Connor, Rasmussen, et al. (2009a) studied factors potentially relevant in their association with self-harm in a sample of 15-16 year old pupils in Central Scotland. In the final analyses, sexual orientation, history of sexual abuse, anxiety, self-esteem, and self-harm by family members independently predicted repeat self-harm, and a history of sexual abuse predicted first time self-harm. Findings support the idea that pre-motivational vulnerability factors provide the backdrop for self-harm (e.g., sexual orientation, history of sexual abuse, anxiety), and volitional factors such as exposure to self-harm among family or friends represent a Volitional Moderator which aids in the transition from ideation to attempt and reflects the cyclical nature of self-harm.

A more recent study with a population-based sample of 4,772 adolescents (aged 16 years) by Mars et al. (2019b) sought to test ideation-to-action frameworks (including the IMV model) more generally. The authors found that adolescents who had attempted suicide were more likely to report exposure to self-harm in family members and/or friends than those who reported suicidal ideation only. In another publication by the same research team, a smaller sample of 16 year olds from the same cohort were followed up at age 21 (Mars et al., 2019a),

to determine which factors predict the onset of suicide attempts among those who reported either suicidal ideation or non-suicidal self-harm at baseline. Analyses demonstrated that exposure to self-harm among family and friends was one of the strongest predictors of suicide attempts among those who experienced suicidal ideation at baseline (along with non-suicidal self-harm, cannabis and other illicit drug use, and higher levels of the personality type intellect/openness). Among those who reported NSSI at baseline, the strongest predictors of future attempts included cannabis and other illicit drug use, sleep problems, and lower levels of the personality type extraversion. These findings offer further support that there are distinct factors which govern the onset of ideation versus behavioural enactment, and furthermore, suggest that exposure to the self-harm of others increases propensity for adolescents to engage in similar behaviours. However, these publications present data on exposure to self-harm irrespective of outcome (i.e., included exposure to non-fatal suicide attempts or self-harm), therefore the specific impact of experiencing *deaths* by suicide as a Volitional Moderator was not independently tested.

In sum, a small number of studies exist which investigate the applicability of the IMV model with adolescents, although few prospective studies have taken place. Theory and evidence support the view that exposure to the self-harm of others is a key predictor of self-harm, both cross-sectionally and longitudinally (Hargus et al., 2009; Mars et al., 2019a, 2019b; O'Connor, 2011; O'Connor & Kirtley, 2018; O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009). Yet, for the most part, this evidence generally focuses on exposure to non-fatal episodes of self-harm, and thus absent from the literature is an exploration exposure to the *death* of others by suicide or non-suicide.

## 1.6 Testing Theory in the Current Thesis

It is now widely acknowledged that research must look beyond the study of individual risk factors in relation to self-harm, and consider the additive effects of multiple circumstances and variables in the emergence of this behaviour (Franklin et al., 2017; O'Connor, 2011; O'Connor & Kirtley, 2018). A key goal for future research is to improve our understanding of factors which distinguish the development of suicidal ideation from attempts, as proposed by ideation-to-action frameworks. Theoretical models such as the IPTS, 3ST, and IMV model provide such an opportunity, and theorists suggest that such models should guide all future research and theory (Klonsky & May, 2014). Some critics have expressed that 'simplistic' theories like the IPTS and other ideation-to-action frameworks are not appropriate for understanding complex behaviours like suicide and offer limited predictive value (Hjelmeland & Knizek, 2020). This has been countered by arguments that parsimonious theory is in fact prevalent and useful in the scientific world, and theories can be valid without requiring accurate prediction of future events (Klonsky, 2019).

As a relative newcomer to the field, the IMV model is an important addition to the theoretical landscape, although it has received less empirical testing to date compared to other models (particularly the IPTS), and thus its components require further empirical scrutiny. It offers a comprehensive account of the multitude of biopsychosocial factors related to suicide, rather than being restricted to a limited range of purported risk factors. The model is valuable in that it brings together key concepts arising from previous theories and sets out defined pathways which can be empirically tested. If supported, the IMV model can direct future prevention and intervention efforts in suicidology by highlighting crucial areas of focus. Although it has garnered increasing interest, limited research has directly tested the model with adolescent age groups, despite self-harm being a significant concern during this stage of life. Research globally, and specifically in Scotland, shows that self-harm is prevalent among

young people, and is one of the biggest predictors of completed suicide (Hawton, Saunders, et al., 2012), therefore, reinforcing the urgency for further work which seeks to understand and predict who is likely to be at risk of suicide.

A specific area requiring further study is the role that bereavement, particularly by suicide, plays in the development of self-harm thoughts or actions. Existing research has established that exposure to non-fatal self-harm by family or friends is associated with one's own self-harm, both in cross-sectional and prospective investigations (Hargus et al., 2009; Mars et al., 2019a, 2019b; O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009). Yet, the part that bereavement plays in this framework is less understood. Looking through the lens of the IMV model, one can theorise that the experience of a suicide loss can act as a pre-motivational phase life event which increases one's background vulnerability to self-harm. Alternatively, exposure to suicide or suicidal behaviour is explicitly described as a Volitional Moderator, facilitating the transition from thoughts of suicide into actions. For the most part, the experience of loss has been largely underexplored within the IMV model, and particularly so with adolescents. In the present thesis, a focus is given to the experience of bereavement or exposure to the death of someone significant (by suicide or other deaths). Chapter 2 will offer a review of the background literature concerning bereavement among young people, and how this fits in within an understanding of suicide and specifically the IMV model.

## **1.7 Chapter Summary**

### **Key points for this chapter:**

- Adolescent self-harm and suicide is a pressing issue in need of urgent attention, given the increasing rates of suicide among young people globally and in Scotland.

- Research shows that knowing someone who self-harms or has attempted suicide is a key predictor of self-harm among adolescents, both cross-sectionally and prospectively.
- Theoretically-informed work is necessary to advance research in this field, moving forward from historical approaches which focused excessively on individual risk factors for suicide in isolation.
- The IMV model is a recent ideation-to-action framework which requires further testing with regards to its applicability to adolescent groups.
- Further research is needed into the specific role that bereavement (particularly by suicide) plays in the emergence of thoughts or behaviours relating to suicide.

**Questions for subsequent chapters:**

- How does bereavement impact adolescents, and particularly bereavement by suicide?
- What role does bereavement play, if any, in the development and maintenance of self-harm?

**Next steps:**

- Chapter 2 will introduce the literature surrounding adolescent bereavement experiences, and how they may be incorporated within the IMV model to understanding young people's engagement with self-harm. The next chapter will conclude with the overarching aims of this thesis, which will be tackled through a series of mixed methods studies to further explore this important topic.

## Chapter 2 Introduction: Suicide Bereavement in Adolescence

Chapter 1 provided a background to the problem of adolescent suicide within a global and Scottish context. It is clear that further work is needed to understand and address the factors which put young people at risk of self-harm, and bereavement is one of such factors which deserves further empirical consideration. This chapter offers an understanding of bereavement in relation to adolescents, with an exploration of how experiencing a death impacts this age group. A review of the background literature and theory is first given, leading to a discussion of potential outcomes which may follow a bereavement, including self-harm. A closer look at whether suicide bereavement differs to other deaths, particularly in relation to risk of suicidal or self-harming thoughts and behaviours (SSHTBs), follows, along with a discussion of possible mechanisms for this association. This then leads onto the focus of this PhD, which employs the IMV model to explore the experiences of bereavement by suicide and other losses among Scottish youth. A discussion of the importance of this topic with reference to policy and practice is given, along with a description of the overarching aims of this thesis. This then leads on to the following chapter (Chapter 3) which provides a systematic review of the literature in this area to develop and refine the remaining research questions of this thesis.

### 2.1 Nomenclature for Bereavement

*Bereavement*, or the status of losing of someone significant through death (Stroebe et al., 2008), is a common event in the lives of young people. The ‘significant’ individual may be a family member, friend, or other individual who represents a personal loss. Although the terms are sometimes used interchangeably, *grief* refers to one’s reactions to the loss, which are primarily internal cognitive and emotional responses (Stroebe et al., 2008), as well as

physical and behavioural reactions (Bui, 2018). The term *grief* thus typically describes the internal suffering or distress one experiences after a loss (Revet et al., 2018). *Mourning*, on the other hand, describes the outward expressions of grief, which are influenced by social and cultural practices, beliefs, and rituals (Stroebe et al., 2008). The following sections will discuss theories and outcomes following bereavement, where the terms *complicated grief*, *prolonged grief*, *traumatic grief*, or *pathological grief* are often employed to describe prolonged, intense, and severe symptoms that characterise pathological grief responses (Jordan & Litz, 2014; Prigerson et al., 2009; Revet et al., 2018). More recently, *prolonged grief disorder* has been included as a new diagnosis within the DSM-5 (American Psychiatric Association, 2013) and the International Classification of Diseases-11 (ICD-11; World Health Organization, 2018), with the latter defining it as a “persistent and pervasive grief response characterised by longing for the deceased or persistent preoccupation with the deceased accompanied by intense emotional pain”.

Individuals who have lost someone to suicide may be termed *suicide survivors*, or *survivors of suicide*, particularly in the United States (Cerel et al., 2014). However, this raises confusion and ambiguity around the term which is also used to denote people who have survived a non-fatal suicide attempt (Andriessen, Krysinska, et al., 2017). Other terms such as *suicide loss survivors*, *suicide bereaved*, or *bereaved by suicide*, are employed more commonly in other parts of the world (Andriessen, Krysinska, et al., 2017). Cerel et al. (2014) discuss the complexity around terminology, noting that definitions vary based on depth and longevity of the impact of the death, as well as the potential need for intervention. In order to advance the debate, they suggest terminology that reflects the “continuum of survivorship”, rather than a dichotomous classification of people affected by a death or not (i.e., recognising that many individuals may be affected by a death in different ways). To this end, Cerel et al. (2014) propose that individuals following a suicide death may be *exposed*,

*affected*, or *bereaved* in the short- and long-term, with each denoting increasing levels of impact.

For the purposes of this thesis, *bereavement by suicide*, or *suicide bereaved*, will be used to describe individuals who have lost someone (e.g., a family member, friend, or any other person) to suicide and whose life is affected by the loss. Given the complexities in defining and determining the impact of a death, and recognising the potential “continuum of survivorship” (Cerel et al., 2014), the term *exposure to suicide* may also be used throughout to describe individuals who have been affected in some way by a suicide (as per Andriessen, Rahman, et al., 2017), but where the level of impact or distress following the death is not necessarily known.

## **2.2 Prevalence of Bereavement**

While investigating the extent of bereavement generally among adolescents in the United Kingdom, Harrison and Harrington (2001) estimated that over three quarters (77.6%) of young people between 11 and 16 years had experienced the death of a first- or second-degree relative or close friend. Fauth et al. (2009) found that 3.5% of children and adolescents (aged 5-16 years) had specifically been bereaved of a parent or sibling, 6.3% a friend, and 0.3% both, while Parsons (2011) reported from the 1970 British Cohort Study that 5% of young people up to the age of 16 had experienced the death of a parent. In Scotland, the Childhood Bereavement Network estimated that 4,100 people under the age of 18 were bereaved of a parent in 2015 (Childhood Bereavement Network, 2016). A recent publication by Paul and Vaswani suggested that 50.8% of children in Scotland aged 8 had been bereaved of a parent, sibling, grandparent, or other close relative, with this rate rising to 62% by the time they reached age 10 (Paul & Vaswani, 2020). However, limited data exist on the

prevalence of bereavement among adolescents in Scotland, and in particular rates of bereavement by different causes of death.

International research into the prevalence of suicide bereavement often cites a historical estimate of 6 people for every suicide death (Shneidman, 1972), though this number is now understood to be underestimated. More recent approximations suggest a number closer to 10 (Andriessen & Krysinaka, 2012), 80 (Berman, 2011), or 135 (Cerel et al., 2018) individuals for each suicide, with studies varying in their participant group or definition of exposure or bereavement.

A study in the United States found that 7% of adults knew someone who had died by suicide in the last year (Crosby & Sacks, 2002). Another US-based study found that 40% of adults knew somebody who had died by suicide in their lifetime, with 20% reporting they were significantly impacted by the death (Cerel et al., 2013), while another study reported a lifetime exposure rate of 48% (Cerel et al., 2016). Findings from the same research group looking at adolescent experiences found that among almost 6,000 adolescents (aged 11-18) in the United States, 1.2% had experienced a family member's death by suicide in the 12 months prior to the survey (Cerel & Roberts, 2005), and 3.2% had experienced exposure to a peer's death by suicide (Cerel et al., 2005). In a prospective cohort study of Canadian adolescents, Swanson and Colman (2013) found that prevalence of exposure to suicide increased with age; 7.2% of 12-13 year olds reported exposure to a schoolmate's suicide (with 3.6% in the past year), and 9.7% to the suicide of someone they knew personally (with 3.7% in the past year). Slightly higher rates of lifetime exposure were seen among 14-15 year olds (19.1% and 13.8%, respectively), and even higher among 16-17 year olds (24.1% and 20.1%, respectively). Finally, a meta-analysis of population-based studies across all ages by Andriessen, Rahman, et al. (2017) estimated that just over 4% of individuals had been exposed to the suicide of someone in their family, friend or peer, or other relationship over

the past year, and 22% over their lifetime, with no differences in rates reported among adolescents compared to adults.

In sum, for each suicide, the number of individuals impacted may vary from 6 people to 135 individuals (Andriessen & Krysinska, 2012; Berman, 2011; Cerel et al., 2018; Shneidman, 1972), and some studies suggest that around half of adults are exposed to a suicide within their lifetime. Less is known about exposure among adolescents, although the existing data suggests that this includes many young people affected. No known research has looked at the proportion of young people in Scotland who have been exposed to, or bereaved by, a suicide death. This is important, as providing appropriate and effective services for those who need them benefits from an understanding of the extent of suicide bereavement.

### **2.3 Theories of Coping with Bereavement or Grief**

In order to understand the impact of suicide bereavement, we must first consider how bereavement is understood more generally within the grief literature. There are no theories specifically in relation to suicide bereavement, although suicide loss has been explored within the concept of disenfranchised grief. This refers to grief which is “not openly acknowledged, socially validated, or publicly observed” (Doka, 2002, p. 55). There are many ways in which grief may be disenfranchised – for example, where the relationship between the person grieving and person who died is not recognised, the loss is not acknowledged, or the griever’s sense of loss is not recognised. Doka further suggests that the circumstances of the death might disenfranchise grief, such as suicide deaths where individuals left behind may perceive a sense of stigma, and are less likely to seek support for their grief or be offered support from others (Doka, 2002).

Several models of grief have been put forward within the literature to help explain general grief reactions and processes among individuals, though these have typically been

developed with adult populations in mind (Revet et al., 2018). Early theoretical perspectives held the view that individuals move through predictable, linear stages when working through their grief (e.g., Bowlby, 1980; Kübler-Ross, 1969). Many were based on the concept that “grief work” (Freud, 1917), which involves a process of breaking ties with the deceased, readjusting to new circumstances, and forming new relationships (Hall, 2014), is necessary for dealing with a loss; failure to engage in these tasks results in maladaptive outcomes. However, in light of limited empirical evidence in support of stage theories, more recent models recognise the complexity of the grief experience and acknowledge that coping or adapting to a loss does not follow rigid patterns or steps or time limits, but is rather a continuous and dynamic experience.

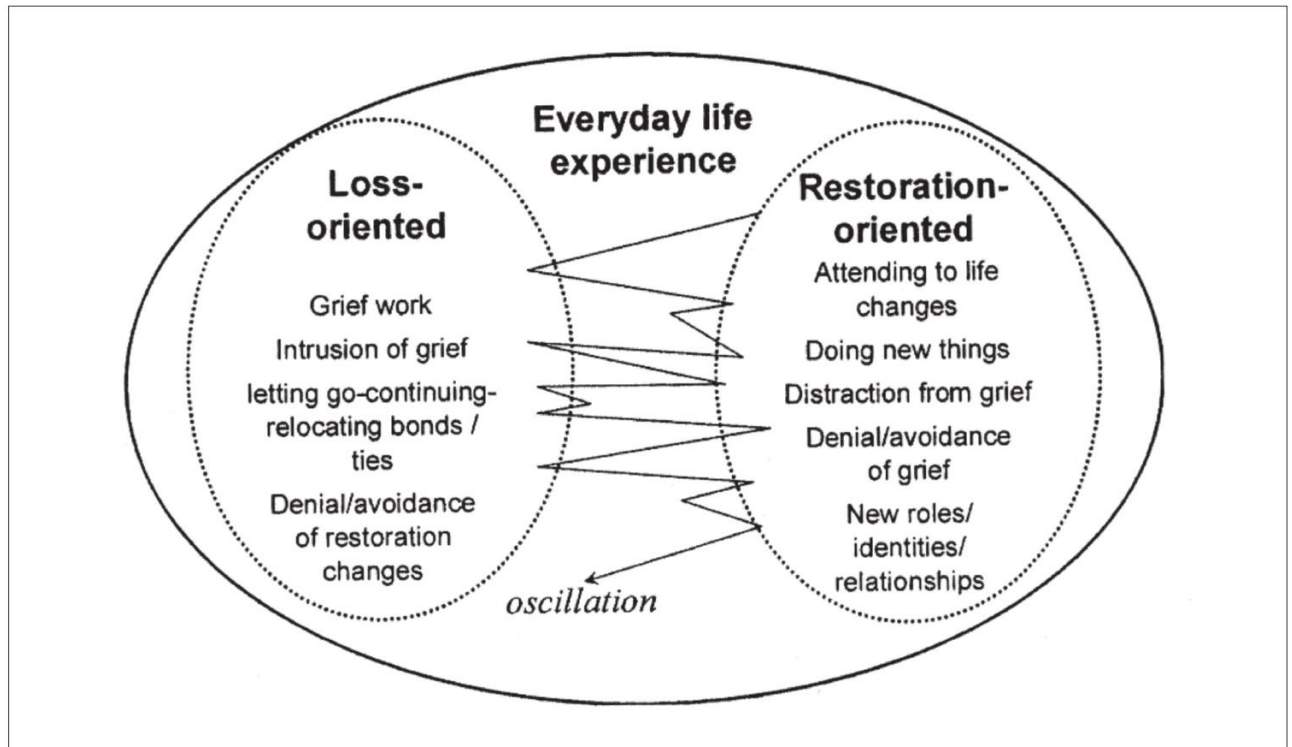
Worden (1991), for instance, proposed a task-centred approach in his Task Model, which suggests that grief is an active process which requires engaging with the loss over a series of four tasks: accepting the reality of the loss, experiencing the pain of grief, adjusting to a new environment without the person who died, and creating enduring connections with the deceased while moving forward with life. Engagement with these tasks is critical for individuals to adjust to a ‘new normal’. Worden acknowledges that grief is not a linear process with a set time frame, and the model acknowledges the individual nature of the grief experience (Worden, 2018).

The Dual Process Model (DPM; Stroebe & Schut, 1999, 2010, 2015; 2016; Figure 2.1) draws on attachment and cognitive stress theories as well as bereavement theory, and postulates that grief is a dynamic process which involves oscillation between two types of stressors: loss- and restoration-oriented stressors. Loss-orientation involves processing and concentrating on the experience of loss itself, and comprises grief work, rumination and yearning for the person who died, while restoration-orientation focuses on dealing with secondary losses (e.g., practical tasks) that complement a death. Crucially, it is the alternation

between these two ways of coping which is seen as necessary for healthy adjustment over time, and promotes emotion regulation by at times confronting, and other times avoiding, stress related to grief. The Dual Process Model suggests that forms of complicated grief may arise where individuals struggle to oscillate between loss- and restoration-orientations (Stroebe & Schut, 1999). Furthermore, its proponents suggest that the model can account for gender differences in grief reactions, cultural variations, changes in grief over time, and can be appropriately applied to different types of losses (Stroebe & Schut, 2010). Recognising that people do not typically grieve in isolation, a more recent update of the DPM extends the model to acknowledge the family dynamics which influence grief, and loss- and restoration-oriented tasks are considered at both the individual and family level (Stroebe & Schut, 2015). The concept of 'overload' was also introduced, which refers to an individual's feeling of having more stressors than they can deal with (Stroebe & Schut, 2016). In turn, this situation may lead to increased, anxiety, distress, and a range of mental and physical health consequences.

**Figure 2.1**

*The Dual Process Model of Coping with Bereavement (Reproduced from Stroebe & Schut, 2010)*



More recently, Neimeyer and colleagues (Gillies & Neimeyer, 2006; Neimeyer, 2011) stressed the role of finding and reconstructing meaning in loss and in a changed world. According to their Meaning of Reconstruction and Loss Framework, individuals who seek to make sense of the death find benefits, undergo a process of identity change to reconstruct meaning from the loss, and begin to view the world in a new way with new meanings (Gillies & Neimeyer, 2006). This process aids in reducing feelings of distress, while an inability to find meaning in the experience has been related to higher levels of complicated or prolonged grief (Alves et al., 2018; Neimeyer, 2011). It is suggested that a search for meaning or making sense of the death is particularly important among those who have experienced a traumatic loss such as suicide, homicide or accidental deaths (Neimeyer, 2011).

Although it is beyond the scope of this thesis to test the many theoretical models of grief, these models offer useful conceptualisations of the process of dealing with death, and propose pathways to help explain why some individuals have difficulties coping and go on to develop adverse outcomes. Although these theories have not been developed or widely tested with adolescents, they may nonetheless be useful to understand how young people deal with loss, and recognise typical versus pathological grief reactions (Revet et al., 2018; Stroebe & Schut, 2010).

## **2.4 Grief Reactions and Outcomes Among Adolescents Following**

### **Bereavement**

As one of the most stressful events that can occur in the lives of young people, bereavement can have a significant and enduring impact on adolescents, and has been associated with a range of social, psychological, and physical health outcomes. Much of the literature tends to focus on poor outcomes following loss, though not all outcomes following bereavement are necessarily negative. In a qualitative study of 39 young Australian adolescents bereaved by suicide or other causes of death, bereaved adolescents described experiencing personal growth through a stronger appreciation for life, greater maturity, and finding meaning through the loss (Andriessen, Mowll, et al., 2018). They also described positive insights into their mental health and increased self-awareness and resilience, along with a greater ability to deal with mental health difficulties and suicidality. Other research also documents posttraumatic growth (i.e., the positive changes that follow a struggle with a major life event; Calhoun et al., 2010) following a death, including greater gratitude and appreciation for life, altruism, a more positive outlook on life (Brewer & Sparkes, 2011a) and spiritual growth (Kilmer et al., 2009).

Nevertheless, research suggests that young people are resilient and will adapt to loss, but this process is influenced by several factors (Dowdney, 2008). Generally speaking, grief reactions vary over time and are affected by developmental changes over childhood and adolescence. Young children understand death and express grief differently to older children and adolescents (Dowdney, 2008), and it is therefore imperative to take into account developmental phase when exploring grief responses (Revet et al., 2018).

Early adolescence, which may be considered to begin as early as age 10 (Sawyer et al., 2018) although often described as covering 12-14 years of age (Robin & Omar, 2014), is characterised by pubertal changes, high emotions and an increased desire for independence. Individuals at this stage may understand the finality of death, but are less interested in the specific details of the death and more in how the loss may impact them. These reactions may appear egocentric, and given their strong desire for peer acceptance, young people tend to be reluctant to express their emotions or grieve publicly. Those experiencing complications with their grief may refuse to attend school, exhibit anhedonia or depression, or partake in increasingly risky behaviours with peers. Older adolescents (15-17 years old) tend to have a better understanding of the consequences of death and integration of the death. They may be more empathetic and considerate towards the needs of others grieving, though may still struggle with displaying their emotions (given the need for social acceptance) and understanding their own mortality (Robin & Omar, 2014). This has links with the discussion in Chapter 1.3 of adolescence as a period of significant transitions (relating to physical and psychological changes, increased independence, changing roles, and identity development), and increased vulnerability for self-harm.

Across all adolescents, grief typically involves a withdrawal from family activities, often in place of seeking support from peer relationships, as described by Dowdney (2008). Young people may question the meaning of life and mortality and experience a range of

emotions while reflecting on their relationship with the person who died. Difficulties in concentration, sleeping and eating, as well as increased risk-taking behaviours are common. Adolescents may also face new roles and responsibilities due to changing family dynamics following a death (Dowdney, 2008). In a qualitative study with individuals who had experienced a death between the ages of 13 to 18, Andriessen, Mowl, et al. (2018) reported that initial reactions following a death ranged from shock and disbelief, to feeling overwhelmed and confused, and crying. Reactions in the months following the death included sadness and yearning, rumination, physical pain, blame, and regret. Feelings of anger and injustice as well as anxieties were also common. Among individuals bereaved specifically by suicide, feelings of guilt and ‘why’ questions relating to the preventability of the death were also reported.

Several factors can influence the way in which young people respond to death. This includes personal characteristics such as age, sex, personality, culture and beliefs, and individual coping styles (Dowdney, 2008; Fauth et al., 2009; Revet et al., 2018). Social and relational factors including family cohesion and available support, as well as parental mental health, can also be important (Dowdney, 2008; Lin et al., 2004). Structural factors including class, gender, and policies on young people may also play a role (Fauth et al., 2009). Lastly, previous experiences with death and the specific circumstances surrounding the death (such as the nature of the relationship, traumatic deaths, or deaths which result in significant life disruption) may also be influential (Fauth et al., 2009; Revet et al., 2018). These factors also relate to engagement in self-harm among adolescents by increasing the vulnerability of young people to negative outcomes (Bilsen, 2018; Hawton, Saunders, et al., 2012), as discussed in Chapter 1.4.

With regards to specific adverse and longer-term consequences, experiencing bereavement has been linked with increased risk of physical health problems (Luecken &

Roubinov, 2012; Tafa et al., 2018). These range from physical health complaints and symptoms, to increased use of medical services, and excess mortality (Prior et al., 2018; Stroebe et al., 2007). Bereavement is also associated with an increased risk of mental health disorders. This includes major depression and post-traumatic stress disorder (Berg et al., 2016; Bolton et al., 2016; Brent et al., 1993), separation anxiety, conduct disorders (Kaplow et al., 2010), bipolar disorder and personality disorders (Melhem et al., 2008), as well as alcohol or substance use problems (Brent et al., 2009; Hamdan et al., 2013; Melhem et al., 2008). Difficulties with work competence and career planning, peer attachment, and lower educational aspirations have also been documented (Brent et al., 2012), as well as greater functional impairment (Kaplow et al., 2010) and prolonged or complicated grief reactions (Melhem et al., 2011; Weinstock et al., 2021). Studies show that the increased risks of adverse mental health and developmental outcomes may persist over years or even decades (Berg et al., 2016; Brent et al., 2012).

A key finding in this area, which relates directly to the focus of this thesis, is the demonstration of an elevated risk of suicidal ideation (Brent et al., 1993), self-harm (Burrell et al., 2020), suicide attempts (Bolton et al., 2016; Jakobsen & Christiansen, 2011; Kuramoto et al., 2013), and completed suicides (Guldin et al., 2017; Niederkrotenthaler et al., 2012) among those who have lost someone to death during childhood or adolescence. These findings come from studies of exposure to any death generally (Guldin et al., 2017), as well as exposure to suicide compared to other deaths (Burrell et al., 2020; Kuramoto et al., 2013; Niederkrotenthaler et al., 2012), and studies which focus specifically on suicide loss (Bolton et al., 2016; Brent et al., 1993; Jakobsen & Christiansen, 2011). The greater risk of self-injurious outcomes may be especially prevalent when the loss occurred during earlier developmental ages (Kuramoto et al., 2013), with accumulating losses (Jakobsen & Christiansen, 2011), or following deaths by external causes or substance abuse (Rostila et al.,

2016). Indeed, research has suggested that the elevated risk of SSHTBs is particularly high following a death by suicide than other causes (e.g., Burrell et al., 2018; Jordan, 2008; Maple et al., 2016; Swanson & Colman, 2013; Wilcox et al., 2010), although these findings are not always replicated in the literature (e.g., Brent et al., 2009; Cerel et al., 1999; Melhem et al., 2008). These conflicting findings might be better understood by considering differences among studies, including samples, measurement tools, confounders, and exposures and outcomes used (which will be explored in Chapter 3). Whether this risk of SSHTBs following a suicide exceeds that following other types of deaths therefore remains unclear, and is of importance for understanding the impact of suicide loss on adolescents.

#### ***2.4.1 Specific Outcomes Following Suicide Bereavement***

While it is established that experiencing a suicide, as any other death, is related to adverse outcomes, the differences between suicide loss and bereavement through other deaths are less clear. Jordan (2001) suggested that suicide loss (at any age) differs from other bereavements in three main ways. Firstly, grief differs in terms of thematic or qualitative aspects: how individuals make sense and derive meaning from the death; feelings of guilt, blame and responsibility; and perceptions of rejection and abandonment. Secondly, the social processes surrounding a death, including isolation and stigmatisation, are different when the death is due to suicide (tying in with Doka's view that grief from suicide might be disenfranchised, as discussed in Section 2.3). Finally, suicide has a unique impact on family systems, altering how family members communicate or interact, deal with conflict and intimacy, and influence each other's behaviours (Jordan, 2001). Since then, more research has aimed to better understand this experience, and studies which compare differently bereaved groups are important to shed light on whether suicide bereaved individuals face unique outcomes.

In the first systematic review of the reactions of people (all age groups) bereaved by suicide compared to other deaths, Sveen and Walby (2008) explored differences in mental health, suicidal behaviour, and overall grief. Across 41 studies, they found no significant differences between groups on general mental health, depression, post-traumatic stress disorder, anxiety, or suicidal behaviour. However, those who had experienced a suicide death reported greater perceptions of rejection, shame, stigma, blame, and a need to conceal the cause of death, compared to those who experienced other deaths. Nonetheless, most studies suffered from methodological limitations including a lack of clear hypotheses and appropriate statistical approaches, biased sampling methods, small sample sizes, and unstandardised instruments. The authors also suggested that findings are sensitive to research methods (with qualitative studies more likely to find differences between groups compared to survey methods) and called for further theory-driven research which addresses these limitations, and also focuses on experiences of understudied groups such as young people.

Pitman et al. (2014) published an updated review comparing the mental health, social functioning and mortality between suicide and other bereaved control groups across all ages. From 57 studies, they found that groups differed in characteristics that preceded the death, such as physical health, mental disorders, and education or income. Furthermore, suicide bereavement was associated with greater depression and suicide attempts, and the impact of the suicide was dependent on kinship relationship. In particular, partners and mothers of adult children who died by suicide showed strong evidence of an association with elevated suicide risk, and there was an increased risk of hospital admission for mental illness among suicide-bereaved parents, and increased depression in offspring of parents who died by suicide. Perceptions of stigma were not unique to suicide losses (and in particular apparent among those affected by violent deaths), but some studies (Bailey et al., 1999; Barrett & Scott, 1990; Harwood et al., 2002; Seguin et al., 1995; Silverman et al., 1995) found that those

bereaved by suicide experienced higher scores on stigma, responsibility, shame, and rejection. The authors noted a lack of studies within the literature that looked at experiences of young people using bereaved control groups (rather than non-bereaved controls), and emphasised that further work is needed to understand adolescent risk of suicidal behaviour following a suicide death (Pitman et al., 2014).

A small number of reviews have looked at the evidence on adolescent outcomes following suicide loss. Kuramoto et al. (2009) examined studies of children and adolescents after the death of a parent. Only nine studies were identified which examined psychosocial and psychiatric outcomes; these showed inconsistent evidence of differences among suicide bereaved groups versus control groups (either bereaved by other causes or non-bereaved individuals). Some evidence was presented for increased risk of suicide and bipolar disorder among suicide-bereaved youth, of a stronger impact following maternal than paternal suicide, and of greater risk of psychiatric illness following deaths that occurred at a younger age. However, evidence was inconsistent across study designs, and the authors suggest that other factors such as family context and study samples may influence findings. Furthermore, those bereaved by suicide may not be a homogeneous group which respond in a single way to grief. Indeed, this would be supported by the literature on bereavement more generally. Several methodological shortcomings in the literature were again noted, including a lack of large-scale studies, an overreliance on cross-sectional and retrospective data, inconsistent and poor measurement of outcomes, and varied control groups who were not always bereaved, making comparisons between groups difficult. Furthermore, only four studies (Agerbo et al., 2002; Cerel et al., 1999; Pfeffer et al., 2000; Roy, 1983) looked specifically at adolescent suicidal ideation or behaviours as an explicit outcome, indicating a gap in research.

Andriessen et al. (2016) examined the circumstances surrounding adolescent suicide bereavement, including pre- and post-loss features. In an analysis of 16 studies with 12-18

year olds, they showed that adolescents bereaved by suicide report a range of feelings following the death, which include guilt, blame, shame, anger, rejection, and stigma. They also engage in risk taking behaviours and experience a number of psychiatric and social adjustment problems following the loss. With regards to suicidal behaviour, mixed findings were reported; some cross-sectional studies (Bjarnason & Thorlindsson, 1994; Blum et al., 1992; Ho et al., 2000; Pirelli & Jeglic, 2009; Smith & Crawford, 1986) report increased suicidal behaviours following exposure to a suicide, while controlled and longitudinal research may not (Brent et al., 1992). There is strong evidence of familial aggregation of suicides (Agerbo et al., 2002; Cheng et al., 2014; Niederkrotenthaler et al., 2012; Qin et al., 2002; Wilcox et al., 2010), though lacking research on the impact of peer suicides. The authors suggest that rather than cause of death, pre-loss features (e.g., family and personal mental health and suicide history, family functioning, and closeness of the relationship) and post-loss factors (e.g., social supports and quality of remaining relationships) may be better determinants of the grief trajectory. Nevertheless, this review included studies which did not always compare suicide-bereaved adolescents with those bereaved by other causes, and therefore whether these outcomes are unique to suicide loss remains unclear.

A recent publication by Hua et al. (2019) looked at exposure to external cause parental deaths during childhood and subsequent suicidal behaviours (deaths, attempts, ideation). Across 26 studies included for review, the majority demonstrated an elevated risk of SSHTBs following a death, although all outcomes were measured in adulthood rather than childhood or adolescence. Several of the included publications (Burrell et al., 2017; Burrell et al., 2018; Garssen et al., 2011; Guldin et al., 2015; Kuramoto et al., 2013; Kuramoto et al., 2010; Li et al., 2014; Mittendorfer-Rutz et al., 2008; Niederkrotenthaler et al., 2012; Rostila et al., 2016; Wilcox et al., 2010) suggested that the risk of suicidality following a suicide loss exceeds that following other external cause deaths (or presents earlier than following other

deaths). However, not all studies included in the review utilised control groups (i.e., individuals bereaved by causes other than suicide), and the review only focused on experiences of parental loss, and deaths to external causes.

Hill et al. (2020) conducted a systematic review and meta-analysis of studies on suicidal behaviour following exposure to suicide and suicide attempts. Exposure to deaths by suicide was associated with subsequent suicide and suicide attempts, but not suicidal ideation. Odds were comparable regardless of the kinship relationship (e.g., relatives versus friends and acquaintances) or age of those bereaved (i.e., adults compared to youth up to 25 years old). Nevertheless, this publication was limited to studies not using participants exposed to other modes of death, and therefore unique outcomes to suicide loss are not possible to ascertain. Although a number of reviews exist in this area, both with adults and younger populations, uncertainty remains about whether adolescents bereaved by suicide have increased risks of adverse outcomes including suicide and self-harm, compared to other bereaved youth. An up-to-date review looking specifically at this question, with a focus on control group studies of adolescent age groups, is lacking.

## **2.5 Potential Explanatory Mechanisms for the Association Between SB and SSHTBs**

Evidence supports the notion that there is an increase in self-harm or suicidality among adults bereaved by suicide, despite this link remaining unclear with younger age groups. Given that there may be an association among adolescents as well, it is worth considering some of the possible explanatory mechanisms for this purported association. These explanations generally cover genetic or biological factors, including heritable disorders and traits, as well as environmental or social explanations, such as assortative relating, social modelling or suggestion.

### ***2.5.1 Genetic/Biological Mechanisms***

Much of the work in this area has looked at familial transmission of suicidal behaviours, and consequently an exploration of genetic components to risk. O'Reilly et al. (2020) investigated factors accounting for the association between parental and offspring suicidal behaviour (attempts or deaths). In a cohort of almost 3 million individuals born in Sweden, their findings suggested that genetic factors accounted for almost 70% of the association between parental and offspring behaviours. Yet, measured covariates, such as parental mental health and environmental factors, were also significant, although to a lesser degree. Further arguments supporting a genetic component come from adoption, twin and family studies, which indicate that familial aggregation of suicidal behaviour is at least in part due to genetic factors (Brent & Melhem, 2008; Tidemalm et al., 2011).

Psychiatric disorders, such as depression and bipolar disorder, are established risk factors for suicide (Bilsen, 2018; Hawton, Saunders, et al., 2012), and may also run in families to explain pathways for the transmission of suicide (Jordan, 2001; Pitman et al., 2014). Brent and Melhem (2008) propose that traits such as impulsive aggression or neuroticism may also be heritable and mediate the transmission of SSHTBs. Additionally, adverse family environments, such as those which include abuse, may influence this association (Brent & Melhem, 2008; Burrell et al., 2020). This suggests that genetic factors do not entirely account for the association between suicide loss and subsequent SSHTB outcomes.

### ***2.5.2 Environmental/Social Mechanisms***

Evidence also exists for transmission of suicide among non-familial peers (Pirelli & Jeglic, 2009; Pitman et al., 2016a), supporting the idea that mechanisms beyond genetics are

in play. Assortative relating, where individuals choose to associate with others similar to them, may bring together vulnerable people who share a high risk for suicide, and this risk may increase given shared life stresses (Brent & Melhem, 2008; Joiner, 2003). De Leo and Heller (2008) examined social modelling in the transmission of suicidal behaviours among peers using data from four large-scale multinational studies. Their findings support the idea that social influences are important particularly among young people. Individuals who identify with a social group may adopt similar thoughts or actions as peers within their group; this can extend to suicidal behaviours which become normalised within their social environment. Other research also supports the suggestion of suicide transmission through social modelling or imitative processes (Insel & Gould, 2008).

Increases in suicides following portrayals in the media (Niederkrötenhaler et al., 2020; Sisask & Varnik, 2012), also known as the *Werther Effect* (Phillips, 1974), add to the growing evidence for suicide *suggestion*, also sometimes termed *contagion*. Social modelling has also been cited as an explanation for increased SSHTBs following exposure to non-fatal suicidal behaviours (Abrutyn & Mueller, 2014; Hill et al., 2020), and it may be that witnessing the self-harm of others offers novel learned ways of coping with distress (Jeglic et al., 2005). Hawton et al. (2020) suggest several mechanisms to explain the clustering of suicides, which refers to an unexpectedly large number of suicide deaths occurring in a specific time and/or place (Insel & Gould, 2008). These purported mechanisms range from social transmission, perceptions about suicidality being widespread, assortative relating, and high levels of social integration that promote suicidal behaviours within communities (Hawton et al., 2020).

Finally, the specific circumstances surrounding the nature of bereavement may play a role in the association between suicide loss and subsequent SSHTBs. As is known for any loss, negative mental and physical health consequences, increased alcohol or substance use,

impairments in social functioning, and prolonged grief reactions may explain why bereavement is associated with excessive short-term and long-term mortality (Prior et al., 2018; Stroebe et al., 2007). Specific to suicide losses, however, factors such as stigma and feelings of responsibility or anger around the suicide, may contribute to increased vulnerability for self-harm (Jordan, 2008; Pitman et al., 2014; Pitman et al., 2016b; Sveen & Walby, 2008). It is these psychological processes which are of particular interest here, given that many approaches to understanding suicide (i.e., ideation-to-action models) emphasise psychological factors in understanding how self-harm and suicidality develop. Psychological approaches offer a framework to understand why certain factors may interact, but also offer modifiable targets for intervention – and for this reason, further research focusing on these processes is important.

## **2.6 Association Between Suicide Bereavement and SSHTBs According to Suicide Theory**

Theoretical models of suicide, such as the IMV model discussed in Chapter 1, offer a useful framework to conceptualise the factors which contribute to suicidal or self-harming thoughts and behaviours. The IMV model specifies exposure to suicide or suicidal behaviour as an explicit Volitional Moderator which governs the transition from ideation and intent to behaviours (O'Connor, 2011; O'Connor & Kirtley, 2018). In other words, individuals who engage in self-injurious behaviours are more likely to have been exposed to the suicidal behaviour of others (family or friends), and this prediction is supported by evidence from the wider literature (Dhingra et al., 2015; McMahon et al., 2013; Pitman et al., 2014). As reported in Chapter 1 (Section 1.5.4), a number of studies (Hargus et al., 2009; Mars et al., 2019a, 2019b; O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009) have specifically tested the IMV model constructs with

adolescents, and demonstrated a link between knowing someone who has self-harmed and future engagement in self-harm. Yet, only one of these studies (Hargus et al., 2009) specified exposure to *deaths* by suicide as a variable (rather than exposure to self-harm more generally, which includes non-fatal self-harm). Hargus et al. (2009) found that exposure to the self-harm of a friend differentiated people with thoughts of self-harm from those who engaged in non-suicidal self-harm, while family self-harm differentiated those with self-harm thoughts from those with suicidal self-harm. Interestingly, the death of a family member, or the suicide deaths of family or friends, were not significant predictors of outcomes among these adolescents. Apart from this study, there has been a general lack of research examining adolescent exposure to deaths within ideation-to-action frameworks.

Though not focussing on adolescents, Wetherall et al. (2018) reported on cross-sectional data from the Scottish Wellbeing Study, which tested IMV model predictions among 3,508 young adults aged 18-34 years in Scotland. Including measures of both exposure to friend/family suicide attempts or deaths, they found support that individuals with no history of self-harm (thoughts or behaviours) differed from ideation and enactment groups on several motivational and volitional phase variables, while ideation and enactment groups differed from each other only on volitional phase variables, as predicted. Importantly, those who reported a history of suicide attempts scored higher than the ideation group on measures of acquired capability, mental imagery about death, impulsivity, and knowing a friend who had made a suicide attempt. However, the authors did not find that exposure to family suicide attempts, or having a family member or a friend who died by suicide, differentiated between groups. Therefore, the placement of suicide death exposure (or bereavement) within understandings of suicide, especially among adolescents, deserves further investigation.

At the same time, the IMV model predicts that adverse life events at any age present a risk factor for suicide within the pre-motivational phase (O'Connor, 2011; O'Connor &

Kirtley, 2018). These events, along with background vulnerabilities for suicide and social or environmental factors, can lead to the emergence of suicidal thinking. Although not explicit within the suicide literature, bereavement represents a potential triggering event for suicide (Niederkröthaler et al., 2012; Serafini et al., 2015) within this model phase, and testing of this association is important to advance suicide prevention research and theory.

## **2.7 The Current Thesis, and Relevance to Postvention, Research and Theory, and Policy**

Thus far, this thesis has highlighted that suicide is a leading cause of preventable death among young people globally (World Health Organization, 2019) and in Scotland (Scottish Public Health Observatory, 2020b), and self-harm is also prevalent among Scottish youth (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009; Quigley et al., 2017b; Russell et al., 2018), representing a key predictor of future completed suicides (Hawton, Saunders, et al., 2012). What is also known is that bereavement can be a risk factor for the emergence of self-injurious outcomes (Bolton et al., 2016; Brent et al., 1993; Burrell et al., 2020; Jakobsen & Christiansen, 2011; Kuramoto et al., 2013; Niederkröthaler et al., 2012). The literature suggests that bereavement is common among adolescents, although the exact prevalence among Scottish youth, either by suicide or other causes, is not known. Furthermore, how adolescents exposed to a suicide death are affected by the loss (on a continuum from minor exposure to longer-term bereavement) remains unclear, as well as whether the experience of suicide bereavement is unique compared to other losses. If found to be a distinct or unique experience, this would suggest that those who have lost someone to suicide may face unique challenges, and thus warrant specialised interventions and supports.

In terms of support currently on offer for bereaved adolescents, this tends to fall into tiered approaches (Akerman & Statham, 2014; Jones et al., 2015; Millar et al., 2020) which

recognise the variability in responses to death. Dependent on need, those who support tiered approaches argue that most young people who are impacted by the death of someone significant should be offered universal support and information on death, while a few will require more targeted supports, and a small number more specialist interventions for complex grief – although this does not always happen consistently in practice. Tiered approaches are also recommended in guidance for supporting bereaved adults (NICE, 2004).

Specific interventions for those bereaved by suicide exist, which are referred to as *postvention* (Andriessen, 2009). Postvention activities range from informal supports from friends and family members to gatekeeper training and outreach services, as well as professional supports from general practitioners and therapists, self-help groups, and reading materials. It has been argued that the evidence for the effectiveness of these interventions is not robust and plagued by methodological flaws (Andriessen, Krysinska, et al., 2019; Linde et al., 2017; McDaid et al., 2008; Szumilas & Kutcher, 2011). Nevertheless, findings from the literature suggest that therapeutic and educational interventions which employ trained facilitators, incorporate wider social contexts (Andriessen, Krysinska, et al., 2019), and target subgroups of individuals at particularly high risk (e.g., for complicated grief or suicidal ideation; Linde et al., 2017) may be especially beneficial. Further work is still needed to understand which kinds of support services may be effective and why, both in reducing levels of distress and complicated grief symptoms. Although postvention is still a relatively new topic of study and will continue to evolve with time, most research in this area relates to adults and a deeper awareness of the specific needs of young people is needed. Therefore, research which seeks to explore how young people experience loss is crucial to inform the development of postventative activities and services to ultimately prevent further negative outcomes.

The previous chapter also identified that future work in relation to young people's experiences of SSHTBs would benefit from the application of theory to better understand the relationship between exposure to and subsequent suicidal or self-harming behaviours. Theoretical progress in this area has historically been impeded by an overemphasis on individual risk factors for suicide, and a lack of understanding of the transition between ideation to attempts. As argued in the previous chapter, these limitations can be addressed by the application of ideation-to-action frameworks to research, such as the IMV model, which differentiate between factors which lead to the development of suicidal ideation from those which lead to behaviours. In this way, the IMV model offers a novel opportunity to explore outcomes among adolescents following a death. The IMV model in particular deserves empirical consideration given that it is a relatively new addition to the field, and has not been extensively tested with adolescent groups. There is a particular lack of research testing suicide bereavement within the IMV model, despite several findings on non-fatal self-harm exposure (Dhingra et al., 2015; Hargus et al., 2009; Mars et al., 2019a, 2019b; O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009).

Though there has been ongoing research in this area, as summarised in a number of reviews over the years (Andriessen et al., 2016; Hill et al., 2020; Hua et al., 2019; Jordan, 2001; Kuramoto et al., 2009; Pitman et al., 2014; Sveen & Walby, 2008), there is urgency for additional adolescent research, as most of the work to date focuses on older age groups who are at a different stage in life. Studies using control groups of individuals bereaved by other causes are also crucial to inform the debate, by allowing a closer examination of unique outcomes to suicide loss rather than factors associated with grief more generally (Pitman et al., 2014; Sveen & Walby, 2008). Calls for further research using representative samples, longitudinal designs, standardised measures, and addressing clear, testable hypotheses have

also been made (Andriessen et al., 2016; Kuramoto et al., 2009; Pitman et al., 2014; Sveen & Walby, 2008) in order to address some of the methodological shortcomings of previous studies. Finally, there is a need for qualitative work looking at the lived experiences of young people, given that this is largely lacking in the literature (Shields et al., 2017), and can complement and expand on the many quantitative findings in this area.

The importance of this topic is not only recognised from the perspective of advancing postvention and research or theory, but also at policy level. The WHO has established suicide prevention as a key global priority in their Mental Health Action Plan (World Health Organization, 2013), recognising the importance of developing and implementing comprehensive national strategies which are targeted towards populations identified at increased risk, including youth. Suicide bereavement has moved high on the policy agenda in many countries in recent years, and all UK nations now recognise the need for timely support for people bereaved by suicide in their national suicide prevention approaches (HM Government, 2012; Northern Ireland Department of Health, 2017; Scottish Government, 2018b; Welsh Government, 2015).

Scotland launched its most recent action plan to prevent suicide, known as Every Life Matters (Scottish Government, 2018b). This plan has established a target of reducing the rate of suicide by 20% by 2022, and several specific actions have been set to achieve this goal. Among them is a commitment to ensure that the needs of children and young people are met across all actions of the plan, and to ensure timely and effective support for people affected by suicide. Certain activities needed to be temporarily halted as a result of the COVID-19 pandemic, which included support for those affected by suicide (Scottish Government, 2021b). This is concerning as the pandemic has increased the risk of young people developing complicated grief (Weinstock et al., 2021). Nevertheless, calls have been made for some time for additional suicide bereavement support to become more readily available

across parts of the UK and the Republic of Ireland (Samaritans, 2014), and concern has been voiced about policies which regard individuals bereaved by suicide as a single, homogeneous group (Pitman et al., 2014). In terms of support for young people, education policy in Scotland cites an aim to develop the mental, emotional, social and physical wellbeing of young people (Education Scotland, 2021). Specific outcomes within education policy relate to learning skills and strategies to deal with challenges in relation to change and loss, although explicit teaching surrounding death and dying is not yet compulsory or widespread.

In sum, suicide and self-harm are a pressing concern among young people that warrants research attention, and further work is needed to understand how bereavement fits within this area. Further knowledge of the extent of suicide loss, and the nature of this experience among Scottish adolescents, is essential. These questions are important for developing postvention activities supporting people bereaved by suicide, for advancing theoretical understandings and research approaches to studying suicide, and from a policy perspective to tackling suicide and youth mental health more generally.

### ***2.7.1 Overall Thesis Aims and Structure***

Following from these gaps in research, two overarching aims of this thesis arise:

- (1) to provide a better understanding of the experiences of adolescents who have been bereaved by suicide or other causes, and
- (2) to explore factors related to the development of adverse outcomes including self-harm among young people.

Chapter 3 presents the findings of a systematic review of the literature which was conducted to explore these aims in more depth and determine the current state of evidence in this area.

The literature review specifically aimed to critically appraise the existing evidence concerning differences in suicidal and self-harming thoughts or behaviours among

adolescents (aged 12-18) bereaved by suicide or other causes. This is necessary given that the last comprehensive review on this topic (Pitman et al., 2014) was conducted several years ago, and using a wider age range. The outcomes of this review, together with predictions derived from suicide theory (as discussed in Sections 1.6 and 2.5), are then used to clarify and develop the subsequent research questions within this thesis, which are presented at the end of Chapter 3. These research questions will be tackled as deemed appropriate upon consideration of methodological options (detailed in Chapter 4).

Chapter 4 offers a consideration of the methodological choices made throughout this PhD to address the research questions that arose from the literature reviews. It presents the methods employed within the remaining empirical chapters and the justification for a series of three studies, which includes quantitative cross-sectional and longitudinal studies, as well as a mixed methods interview study. Chapters 5 and 6 (Studies 1 and 2) discuss the findings from a quantitative cross-sectional and longitudinal investigation, respectively, to examine whether bereavement experiences and psychological variables are associated with self-harm outcomes. Chapter 7 (Study 3) presents the findings from a mixed methods interview study into the lived experiences of young people following a death. Finally, Chapter 8 brings together the empirical results across this thesis, along with a consideration of the limitations, challenges, implications for practice, policy, and research, and an overall conclusion to this body of work.

## **2.8 Chapter Summary**

### **Key points for this chapter:**

- Bereavement is a common experience among adolescents, although the prevalence and impact of suicide bereavement on young people is not well understood.

- Research shows that bereavement is associated with a range of outcomes, including self-harm and suicidality.
- Some evidence exists that people bereaved by suicide are at higher risk of self-harm or suicide outcomes than those bereaved by other modes of death, although it is unclear whether this finding applies to adolescent age groups.
- Suicide theory may help to understand and explain whether and how bereavement affects adolescent risk of SSHTBs.

**Questions for subsequent chapters:**

- What is the evidence of elevated self-harm or suicidality among youth (aged 12-18) bereaved by suicide versus other causes of death?
- What research questions do the findings of the systematic review suggest still need exploring in relation to the extent and impact of bereavement among adolescents?

**Next steps:**

- Chapter 3 will critically appraise the literature surrounding adolescent bereavement and subsequent self-harm among those who have lost someone to suicide or other causes of death. This will help clarify the remaining research questions and programme of research undertaken during this thesis, which employs a psychological model of suicide as a framework to understand adolescent experiences within the context of bereavement.

## **Chapter 3 A Systematic Review of Controlled Studies Investigating Suicidal and Self-Harming Thoughts and Behaviours Among Adolescents Following Bereavement by Suicide**

The systematic review presented in this chapter has been published in the journal PLOS ONE (del Carpio et al., 2021). This publication is an open access article, licensed under a Creative Commons CC BY license. This signifies that any part of the article can be used, distributed, and reproduced in any medium without permission, providing that the author(s) and original source are clearly cited (Creative Commons, 2022; PLOS ONE, 2022).

A copy of the published article can be accessed at:

<https://doi.org/10.1371/journal.pone.0254203>.

The current chapter presents a slightly modified version of the published review, which includes elaboration on some aspects of the methodology and conclusions relevant to this PhD, which are not provided in the published material, in order to situate the review in the context of this thesis. Unlike the published article, this chapter concludes with a discussion of the research questions to be addressed throughout this thesis, as clarified from the findings of the review.

### **Abstract**

#### **Background**

Research suggests that being exposed to the suicide of others increases risk of subsequent suicidal or self-harming thoughts or behaviours. What is less clear is whether this applies to adolescents, and if the risk exceeds that following other causes of death, which has implications on suicide prevention approaches. This study aimed to systematically review the evidence on adolescent bereavement experiences by different causes to address this gap.

## **Methods**

A comprehensive literature search using four databases (MEDLINE, PsycInfo, Web of Science, and Embase) identified 21 studies which measured suicidal or self-harm outcomes among bereaved adolescents aged between 12 to 18 years old. The literature was screened, data were extracted using pre-piloted forms, and risk of bias was assessed using versions of the Newcastle-Ottawa Scale; a proportion of papers were double extracted and assessed for bias. The review has been registered with PROSPERO (CRD42016051125).

## **Results**

A narrative synthesis of the literature demonstrated divergent findings depending on the outcome being measured. Suicide bereavement appears to be strongly associated with suicide mortality among parentally bereaved youth, while self-harm or non-fatal suicide attempts (either presenting to hospital or self-reported) showed mixed evidence. Suicidal ideation was not uniquely associated with suicide bereavement. An exploration of circumstances surrounding the death, characteristics of the person who died, and characteristics of the young person across each outcome measure suggested that earlier experiences of loss, shorter timeframes following the death, and maternal death are associated with particularly elevated risk of suicidal outcomes.

### **3.1 Introduction**

Despite advances in our understanding of the aetiology and risk factors for suicide, knowledge about the role of suicide bereavement remains incomplete. As discussed in the introductory Chapters 1 and 2, suicide accounts for over 800,000 deaths worldwide annually (World Health Organization, 2014), and somewhere between 6 and 135 people are thought to be affected by each suicide (Andriessen & Krysiniska, 2012; Berman, 2011; Cerel et al., 2018; Shneidman, 1972). This indicates that extensive numbers of people are grieving the loss of a

friend, family member or acquaintance, and it is thought that a large proportion of these could be adolescents. Research has also shown that suicidal or self-harming thoughts and behaviours (SSHTBs), irrespective of intent, are prevalent among young people (Hawton, Saunders, et al., 2012; Nock et al., 2013). This is especially concerning given that self-harm is a key predictor of completed suicide (Hawton, Saunders, et al., 2012). The additional trauma of a bereavement during this life stage – and in particular, bereavement by suicide – could potentially result in further difficulties that compound this vulnerability.

Adolescents bereaved by any cause may experience a wide range of negative mental health outcomes including anxiety, depression, and post-traumatic stress disorder (PTSD; Melhem et al., 2008). Also reported in the literature are increased health risk behaviours, functional impairment, perceived lack of control (Kaplow et al., 2010), lower peer attachment (Brent et al., 2012), and an elevated risk of SSHTBs (Niederkrötenhaler et al., 2012). It has been suggested that the risk of SSHTBs is especially high following a death by suicide (Jordan, 2008; Pitman et al., 2014). However, whether such bereavement confers higher risk than other losses is yet unclear.

In an early review comparing the reactions of those bereaved by suicide to other deaths, Sveen and Walby (2008) assessed 41 studies across all age groups, and concluded that people bereaved by suicide reported higher levels of rejection, shame, stigma, concealing the cause of death, and blame. No significant differences were observed with regards to general mental health, depression, anxiety, symptoms of PTSD, and suicidal behaviour (although only five studies across all age groups measured suicidal ideation and attempts). More recently, Pitman et al. (2014) evaluated studies of bereavement by suicide versus other types of death. With regards to suicide risk, evidence of increased risk was found among adults bereaved by the suicide of a partner or ex-partner, and mothers bereaved of an adult child, compared to other causes of death. Preliminary evidence was also found of increased suicidal

ideation and attempts among twins who had lost a co-twin. However, these findings were for the most part based on adult samples, so results are not necessarily relevant to younger age groups.

Reviewing evidence of the experiences of adolescents exposed to suicide loss, Kuramoto et al. (2009) looked at studies of child and adolescent offspring exposed to parental suicide. The scant literature at the time identified only nine studies with inconsistent evidence regarding psychiatric and psychosocial outcomes, and only four considered SSHTBs as a measured outcome. Andriessen et al. (2016) reported mixed findings regarding suicidal behaviours following the death of a friend (with cross-sectional studies more likely to find an association than longitudinal research), while there was compelling evidence of increased suicide risk following familial suicides. However, this review was not limited to control group studies. Hua et al. (2019) examined the relationship between external cause parental deaths in childhood and suicidal behaviours in adulthood. Across 26 studies, there was overwhelming evidence of an association between childhood exposure to suicide and subsequent suicide risk, and four controlled studies suggested the risk was higher than in those bereaved by other external causes. However, this review examined outcomes which occurred in adulthood, following parental death only, and also included uncontrolled studies. More recently, Hill et al. (2020) reviewed studies on exposure to suicide and suicide attempts, and found that exposure to suicide was associated with an increased odds of suicide and suicide attempts, though not suicidal ideation. Age was not found to moderate risk, as shown through comparisons of studies with a majority of youth (aged 25 or under) compared to adult participants. However, this meta-analysis excluded studies where control groups were comprised of participants who had been exposed to other modes of death. Research using bereaved control groups is essential to determine whether suicide bereaved young

people have unique experiences which warrant specific supports, over and above those following any bereavement.

### **3.1.1 Objective**

While previous reviews catalogue the developments in this area, an updated literature review comprising control group studies that focus specifically on adolescents is needed. This is important given that gaps remain in our knowledge about adolescent experiences, as findings from adult studies may not translate to young people; further knowledge is also needed about which factors help explain this association, if one exists. Focusing on control group studies is necessary to clarify whether suicide bereavement specifically confers greater risk of SSHTBs compared to other forms of loss. Studies using solely non-bereaved controls limit conclusions that can be drawn about whether the experiences of a suicide-bereaved group are unique to this type of loss rather than bereavement experiences generally. Such findings would assist in the development of interventions for people bereaved by suicide (i.e., postvention), as evidence for its effectiveness is still being established (Andriessen, Krysiniska, et al., 2019; McDaid et al., 2008). The results of this review could also inform theoretical frameworks which highlight the pernicious effects of exposure to the self-injurious behaviour of others (e.g., Klonsky & May, 2015; O'Connor & Kirtley, 2018; Van Orden et al., 2010). Suicide prevention policies now recognise bereaved individuals as a key target for further research and intervention (HM Government, 2019; Scottish Government, 2018b), and the vulnerability of young people has also been acknowledged. Despite this, our understanding of the role of bereavement by, or exposure to, suicide in the development of youth suicidal behaviours is still unclear. Although differences between exposure to a death and bereavement are noted, these terms may be used interchangeably in this review given the inconsistent usage in the literature.

The objective of this review was to explore the evidence on whether bereavement by suicide confers greater risk of self-harm or suicidal outcomes (thoughts and behaviours) relative to other modes of death, among adolescent groups. The following three key questions were posed:

1. Does bereavement by suicide lead to greater risk of suicidal or self-harming thoughts and behaviours in adolescents compared to bereavement by other causes?
2. Do other factors related to the death affect the relationship between suicide bereavement and adverse outcomes?
3. Finally, which measures have been used to capture outcomes in the literature?

## **3.2 Methods**

### ***3.2.1 Protocol and Registration***

A systematic approach to review the literature was used, based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). The review protocol was developed a priori and registered with PROSPERO (CRD42016051125) (accessible at: [http://www.crd.york.ac.uk/PROSPERO/display\\_record.php?ID=CRD42016051125](http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016051125)).

### ***3.2.2 Eligibility Criteria***

Criteria for inclusion comprised original empirical studies which reported on experiences of individuals exposed to or bereaved by a death, regardless of their relationship to the deceased (e.g., family members, friends, significant others). Eligible papers needed to be published in a peer-reviewed journal, in English, using any study design, and comparing exposure to suicide deaths to at least one other non-suicide bereaved comparison or control group. Studies needed to include at least one measure of self-harm or suicidal thoughts or

behaviours, irrespective of intent. They also needed to include adolescent participants, who were defined as being between the ages of 12-18 years old at the time of assessment of outcomes (though the time of death was not restricted to having occurred within this age range).

Studies were excluded if they were review articles, used solely non-bereaved comparators or controls as the comparison group, or investigated deaths reported by the media or assisted suicides. Exclusions were also made where group membership was unclear, such as papers providing data on outcomes following a suicide death and any death generally (i.e., not clearly a separate, mutually exclusive cause of death group). Studies were also excluded where they focused solely on parents whose offspring had died, as it was presumed that any individuals in the suicide-bereaved group were unlikely to be 18 years old as well as the parent of a child who died by suicide, given that suicide rarely occurs in people under the age of 15, and is generally not recorded in national statistics under the age of 10 (Hawton, Saunders, et al., 2012; Roh et al., 2018). Lastly, publications which focused solely on the experience of individuals aged 18+ (inclusive of 18 year olds) were excluded, where it was evident that these studies were investigating the experience of adult participants (often with a mean age significantly older than adolescent groups). However, an upper age limit of study participants was not imposed as long as participants met the other study criteria, as it was acknowledged that definitions of adolescence vary and may include individuals up to age 24 (as noted in Section 1.3; (as noted in Section 1.3; Sawyer et al., 2018; World Health Organization, 2021).

It was acknowledged that there would likely be instances of overlap among age groups, with 12-18 year old participants and younger or older participants recruited/grouped together. Given that publications rarely provide detailed data on the proportions of 12-18 year

olds included within the study, or offer results stratified by age, a decision was made to report on the full study findings for all publications combined.

### ***3.2.3 Information Sources and Search Strategy***

A search of four electronic databases (Ovid Medline, PsycInfo, Web of Science, and Embase) was conducted on 27 May, 2019, with an update for additional publications searched in May 2020. No restrictions were applied at the search phase for date, type of study, or language. The following search terms covering the exposure, outcomes, and population of interest were used: (bereave\* OR grie\* OR mourn\* OR loss OR survivor\*) AND (suicid\* OR parasuicid\* OR self-harm\* OR self harm\* OR self-injur\* OR self injur\* OR self-mutilat\* OR self mutilat\* OR self-cut\* OR self cut\* OR self-immolat\* OR self immolat\* OR self-destruct\* OR self destruct\* OR self-inflict\* OR self inflict\* OR self-poison\* OR self poison\* OR overdos\* OR DSH OR NSSI) AND (adolescen\* OR teen\* OR youth\* OR young\* OR child\*). Reference lists of relevant papers and reviews and core suicidology journals were also searched.

### ***3.2.4 Study Selection***

Literature searches, removal of duplicate references, and screening of titles and/or abstracts to identify potential papers were completed by the author (LdC). Full text versions of papers were obtained and assessed for eligibility, with difficult cases referred to the first supervisor (SR) for discussion, and unresolved cases discussed with the second supervisor (SP). Reasons for rejections are presented in Figure 3.1.

### **3.2.5 Data Collection Process and Data Extraction**

A pre-piloted form was used to extract pertinent information from studies which met inclusion criteria. This covered: authors, year of publication, study aims, setting, design and procedure, participant characteristics, details of the deaths (e.g., cause, kinship relationship), outcome measure, and relevant covariates, results, and limitations. A second reviewer (AP, a postgraduate researcher based in the School of Psychological Sciences and Health at the University of Strathclyde) independently extracted data from over 40% of the papers ( $n=9$ ) to check for accuracy, and any disagreements were resolved through discussion. The aim was to have the second reviewer complete this for a minimum 10% sample of the data, and nine papers (42.9%)<sup>2</sup> were randomly selected for double extraction and appraisal.

### **3.2.6 Risk of Bias**

Risk of bias in individual studies was assessed by the first author using an adapted, pre-piloted version of the validated Newcastle-Ottawa Quality Assessment Scales (NOS; Wells et al., 2013) for case-control and cohort studies. Studies were rated across three domains: selection of groups, comparability of groups, and ascertainment of exposure or outcome of interest. Quality ratings score a maximum of nine stars across the three categories, with higher scores indicating higher quality. Cross-sectional studies were assessed with a scale similar to that developed by Herzog et al. (2013), based on the original NOS

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<sup>2</sup> Initially, a total of ten papers were randomly selected for double extraction and appraisal, given that a first draft of this review identified 30 publications which met inclusion criteria. This included nine studies consisting of samples of individuals aged 18 or above, as it was felt that these publications did fit the inclusion criteria, with at least some individuals aged 18 (i.e., adolescents). However, much consideration was given to feedback from an anonymous journal reviewer with concerns that studies of this age group should not be included as they omitted participants below the age of 18. It was ultimately agreed that including research with solely 18+ year olds would not provide an accurate reflection and evaluation of the adolescent experience of bereavement, even if some individuals within the study met inclusion criteria. Hence, 21 publications remained in the final review, with nine of these having been double-extracted and appraised by a co-author.

coding manual for cohort studies; papers were similarly rated on selection, comparability, or outcome, with a maximum possible total score of 10.

To avoid bias, a proportion of papers ( $n=9$ ; 42.86%) were independently quality assessed by an additional reviewer (AP). Cohen's kappa indicated substantial agreement between ratings across individual NOS items,  $\kappa = .864$ ,  $p < .001$ . Disagreements over the risk of bias in individual papers were resolved through discussion. A decision was made to not exclude studies on the basis of their quality rating, but to incorporate the assessment of bias into the interpretation of results.

### ***3.2.7 Planned Methods of Analysis***

A narrative synthesis was chosen to review the data, as it was found that there was wide heterogeneity across study populations, exposures and outcomes, research designs, study quality (including risk of bias and sources of confounding), and statistical approaches, which deemed meta-analysis not appropriate. Meta-analysis involves the use of statistical techniques to combine results from two or more studies into summary statistics or effect sizes (Deeks et al., 2020). It can be valuable where the data allows it, but unsuitable and produce meaningless summaries where it is not warranted (Deeks et al., 2020; Haidich, 2010). Indeed, when the literature comprises several low quality studies (Borenstein et al., 2009; Greco et al., 2013), as this review did find, or inconsistency in the direction of effect, summary measures can lead to biased and misleading conclusions (Deeks et al., 2020). The narrative synthesis chosen here was structured around outcomes measured, which included: suicide deaths, hospitalisations for self-harm or suicide attempt, and self-reported suicidal/self-harm ideation or behaviours. To address the study RQ1 and 2, details of each study were reported under the broad domains of: bereavement circumstances, characteristics of the person who died, and characteristics of the bereaved individual. Discussion of the methods used to

capture the outcomes in the literature (RQ3) are provided within the descriptions of each study.

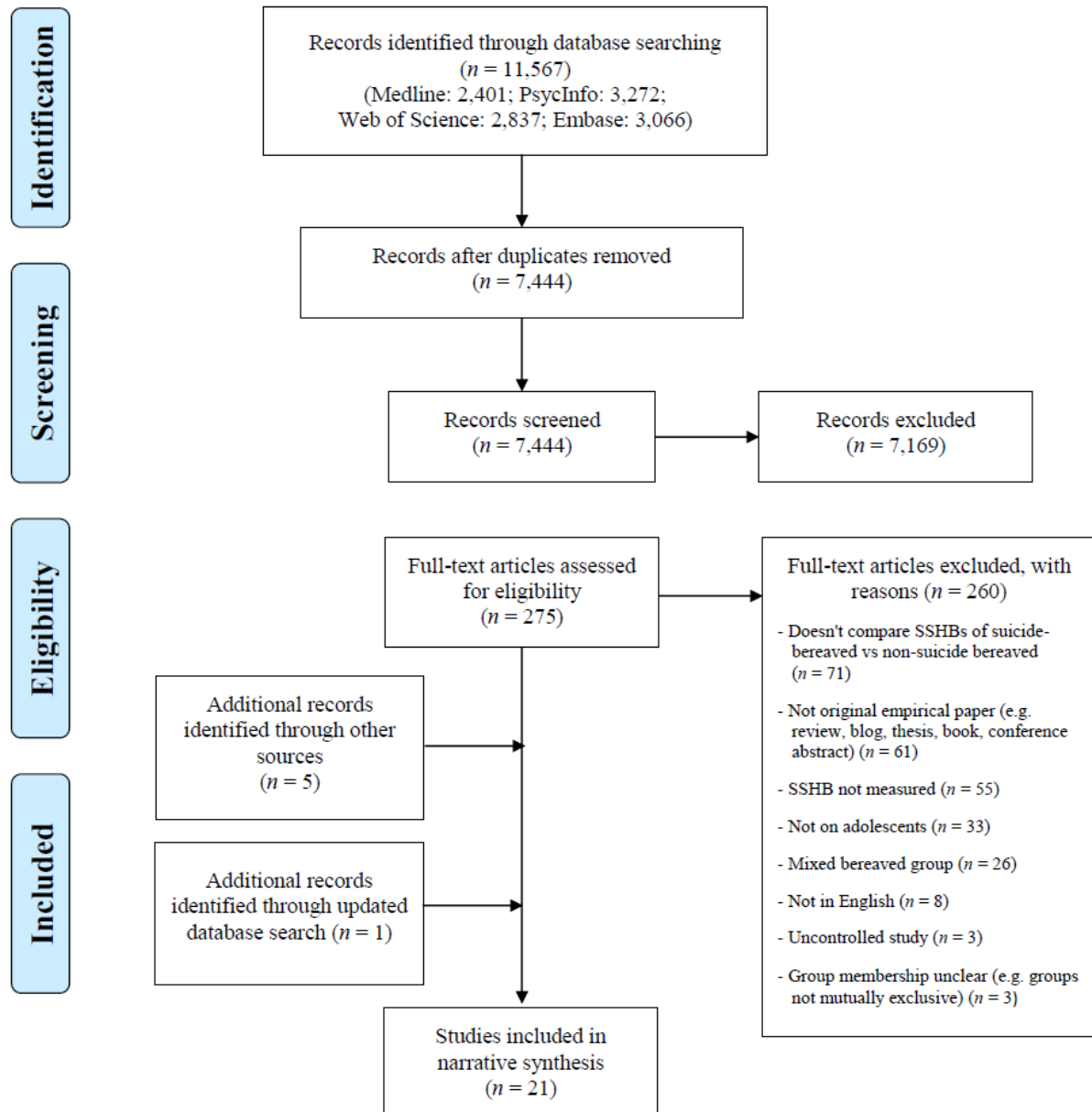
### **3.3 Results**

#### **3.3.1 Study Selection**

A total of 11,567 records were identified from the initial search, which was reduced to 7,444 after removal of duplicates. Titles and/or abstracts were screened for inclusion, resulting in 275 records to be fully assessed. This identified 15 includable studies, with reasons for rejections detailed in Figure 3.1. A further five papers were identified through hand-searching reference lists of relevant papers and reviews as well as core suicidology journals, and one additional paper was found through the May 2020 search update. A flow chart of this process is presented in Figure 3.1.

**Figure 3.1**

*PRISMA Flow Diagram Illustrating Study Selection Process*



### 3.3.2 Study Characteristics

Details of the 21 papers selected for inclusion in this review are summarised in Table 3.1. The papers were published between 1992 and 2020, and some were publications of the same research groups reporting on the same sample (marked in table with superscript letters).

The research took place across nine countries, mostly within Europe ( $n=13$ ) and the United States ( $n=6$ ), as well as Australia ( $n=1$ ) and Taiwan ( $n=1$ ). The study designs included nine case-control studies, eight cohort studies, and four cross-sectional studies. No qualitative studies which met inclusion criteria were identified.

Fourteen studies utilised data from national longitudinal registers which retrieved information from the whole or majority of the population over years or decades; most of these were based in European countries (Denmark, Sweden, Norway, Finland), with one in Taiwan. Smaller studies tended to be cross-sectional in design, which ranged from having 16 (Pfeffer et al., 2000) to 40 (McIntosh & Kelly, 1992) participants who had lost someone to suicide. One study recruited individuals aged 17 or above, while the remainder measured SSHTB outcomes at varying younger ages as well. The number of male participants (within bereaved groups or the total sample, as reported) ranged from 19.4% to 77.8%. Retrospective studies of people who died by suicide (mostly case-control) were overrepresented by males, while those looking at non-fatal suicide attempts included more females, reflecting the gender distribution of deaths and attempts in the general population (Hawton & van Heeringen, 2009; Nock et al., 2008). Cohort studies investigating outcomes following a death generally had an equal gender distribution, while cross-sectional research which tended to employ convenience samples had a greater proportion of females.

A majority of studies looked specifically at the death of a parent ( $n=16$ ), while one looked only at sibling death, and the remainder at a combination of family members, friends, or acquaintances ( $n=4$ ). Comparison groups included bereavement by other external causes, sudden deaths, natural vs. unnatural deaths, or studies of deaths by any cause across the entire population. Outcomes were broken down into: deaths by suicide (from mortality statistics;  $n=9$ ), hospitalisations for self-harm or suicide attempt (from clinical registers;  $n=7$ ), and self-

reported ideation or behaviours (assessed using interviews or self-report measures;  $n=7$ ; N.B., some studies measured multiple outcomes so counts do not add up to 21).

**Table 3.1***Summary of Studies Included in the Review*

<b>Citation &amp; Country</b>	<b>Study Design</b>	<b>Participant Characteristics</b>	<b>Kinship Relation</b>	<b>Comparison Group</b>	<b>SSHTB Measure</b>	<b>Relevant Findings</b>
Agerbo et al., 2002 Denmark	population-based nested case-control study	10-21 years, died between 1981-1997  77.82% male	parent or sibling	Cases: died by suicide ( $n=496$ )  Controls: randomly selected alive person, matched on sex, age, and time (50:1, $n=24,800$ )  Bereavement by suicide ( $n=20$ cases, $n=220$ controls), other causes ( $n=26$ cases, $n=844$ controls), non-bereaved (number not given)	Danish medical register on vital statistics measured suicide deaths using ICD-8 (E950-E959) and ICD-10 (X60-X84) codes	Risk of suicide increased among offspring of paternal (IRR=2.30, 95% CI=1.10-4.80) and maternal (IRR=4.75, 95% CI=2.10-10.80) suicide, and maternal death by other cause (IRR=2.06, 95% CI=1.02-4.19).  Sibling suicide or death by other cause not associated with suicide.
Andriessen, Hadzi-Pavlovic, et al., 2018 Australia	cross-sectional study	12-28 years ( $M=19.87$ , $SD=3.89$ )  19.4% male	family member or friend	suicide ( $n=37$ ), natural ( $n=109$ ), other (accident, homicide, or unknown; $n=30$ )	Two items from novel Adolescent Grief Inventory measured self-harm or suicidal-ideation at one month post-loss and past month - items combined with anxiety-related items to form a single factor of "anxiety and self-harm"	Suicide bereaved group scored higher on anxiety and self-harm factor in the first month following the death (but not currently, in the last month), compared to those bereaved by natural death.
Brent et al., 2009 <sup>b</sup> USA	cohort study	7-25 years suicide: 50.9% male accident: 45.5% male sudden natural: 59.5% male non-bereaved: 50.0% male	parent	suicide ( $n=53$ ), accident ( $n=44$ ), sudden natural (myocardial infarction, infections, other; $n=79$ ), non-bereaved ( $n=168$ )	Suicidal Ideation Questionnaire-JR (child) or Suicidal Ideation Questionnaire (adult) measured suicidal ideation	No significant differences between groups on levels of suicidal ideation after 21 months.

		Interviewed/followed-up at 9 and 21 months after the death				
Burrell et al., 2017 <sup>d</sup> Norway	nested case-control study using population-based registers	0-65 years at time of parental bereavement  Cases were 12-65 years when died by suicide ( $M=40.7$ , $SD=12.6$ )  70.1% male	parent	Cases: bereaved person, died by suicide ( $n=375$ )  Controls: randomly selected alive bereaved person, matched on age, gender, and suicide date (20:1, $n=7,500$ )  Bereavement by external causes: suicide ( $n=170$ cases, $n=2151$ controls), transport accident ( $n=67$ cases, $n=1827$ controls), other external causes ( $n=138$ cases, $n=3522$ controls)	Cause of Death Register measured suicide deaths using ICD-8/9 (E95) and ICD-10 (X60-X84 and Y870) codes	Parental death by suicide significantly increased offspring suicide risk compared to parental death by transport accidents or other external causes.  Increased risk when both parents died (vs one parent). No differences based on gender of deceased parent or offspring age at bereavement or suicide death (12-29 vs 30-65 year olds).
Burrell et al., 2018 <sup>d</sup> Norway	nested case-control study using population-based registers	0-64 years at time of parental bereavement (if bereaved)  Cases were 11-64 years when died by suicide ( $M=39.3$ , $SD=13.6$ )  73.36% male	parent	Cases: died by suicide ( $n=19,015$ )  Controls: randomly selected alive person, matched on date of birth, gender, and date of suicide (20:1, $n=332,046$ )  Bereavement by external causes: suicide ( $n=209$ cases, $n=1300$ controls), transport accident ( $n=94$ cases, $n=1151$ controls), other external causes ( $n=182$ cases, $n=2239$ controls), non-bereaved ( $n=11,966$ cases, $n=234,135$ controls)	Cause of Death Register measured suicide deaths using ICD-8/9 (E95) and ICD-10 (X60-X84 and Y870) codes	All external cause parental deaths associated with increased suicide risk; higher risk following parental suicide than transport accidents or other external causes (OR=2.86, OR=1.36, and OR=1.28, respectively).  Risk of suicide following parental suicide higher among 11-24 year olds (OR=4.18) than 25-64 year olds (OR=2.63). Transport accidents and other external causes not associated with increased risk among 11-24 year olds.

Burrell et al., 2020 Norway	nested case-control study using population-based registers	0-18 years at time of parental bereavement (if bereaved)  43.6% male  Born between 1970-2003; at least 10 years old at time of DSH	parent	Cases: received hospital treatment for DSH between 2008-2013 ( $n=12,526$ )  Controls: randomly selected person with no hospital-recorded DSH, matched on gender, date of birth, and date of DSH hospitalisation (20:1, $n=222,362$ )  Bereavement by external causes: suicide ( $n=148$ cases, $n=871$ controls), transport accident ( $n=54$ cases, $n=592$ controls), other accident ( $n=76$ cases, $n=517$ controls), other external causes ( $n=9$ cases, $n=98$ controls), non-bereaved ( $n=12,239$ cases, $n=220,284$ controls)	Norwegian Patient Register measured DSH presenting to hospital using ICD-10 (X6n, Y87) codes, and probable DSH also measured with ICD-10 codes related to poisoning/injuries and comorbid mental or behavioural problems, or other poisoning	Parental death by suicide (OR=2.32) and other accidents (OR=1.79) significantly increased risk of DSH hospitalisation compared to non-bereaved offspring, but not transport accidents or other external causes. Risk following parental suicide significantly higher than risk following parental transport accidents.  No differences depending on parent or offspring gender. Highest risk of DSH hospitalisation in first 5 years following death.
Cerel et al., 1999 USA	longitudinal study	5-17 years  suicide: $M=11.7$ , $SD=3.4$ non-suicide: $M/SD$ not reported but <i>ns</i> different  Half male  Interviewed/followed-up at 1, 6, 13, and 25 months after the death	parent	suicide ( $n=26$ from 15 families), non-suicide (cause other than suicide or homicide; $n=332$ )	4-point suicidality scale summing endorsements of suicidal ideation, intent, plans, and attempts (not described)  Children's Depression Inventory item measured suicidal ideation	No significant differences between bereaved groups across 18 comparisons, including suicidality.
Cheng et al., 2014 Taiwan	nested case-control study using	15-19 years (born between 1978-1992, died between 1997-2007)	parent	Cases: died by suicide ( $n=500$ )  Controls: randomly selected alive person, matched on age	Taiwan Mortality Registry measured suicide deaths using ICD-9 Clinical	Increased risk of suicide following paternal suicide (OR=5.38), sig higher than paternal non-suicide (OR=1.88), $p=.015$ . Increased risk of suicide following maternal suicide (OR=6.59),

	national registers	Cases: 61.4% male Controls: 52.1% male		and time (30:1, $n=15,000$ )  Bereavement by suicide ( $n=9$ cases, $n=45$ controls), other causes ( $n=62$ cases, $n=947$ controls), non-bereaved ( $n=929$ cases, $n=29,008$ controls)	Modification (E950-E959) codes	but $n$ s higher than maternal non-suicide (OR=1.94).  Male cases more likely to have been bereaved by paternal (OR=8.23), but not maternal suicide. Female cases more likely to have been bereaved by maternal (OR=9.71), but not paternal suicide.
Christiansen et al., 2011 <sup>a</sup> Denmark	nested case-control study using population-based registers	Age at suicide attempt: males $M=18.2$ years, females $M=17.3$ years  21.3% male  Born between 1983-1989; followed-up from age 10 until 2005	parent	Cases: attempted suicide ( $n=3,465$ )  Controls: not attempted suicide, matched on age and gender (20:1, $n=69,300$ )  Bereavement by suicide ( $n=26$ cases, $n=200$ controls), other cause ( $n=228$ cases, $n=2,788$ controls), non-bereaved ( $n=3,211$ cases, $n=66,312$ controls)	Combined data from National Patient Register and Danish Psychiatric Central Registry measured suicide attempts presenting to hospital, using hospitalisation contact code E4 (suicide attempt), ICD-10 (S617-S619, X60-X84, T36-T60, or T65), ICD-8 (E9500-E9599) or ICD-10 (X60-X84) codes.	Both suicide (IRR=4.71 and IRR=2.25 for males and females, respectively) and non-suicide (IRR=1.56 and IRR=1.73 for males and females, respectively) parental deaths increased risk of suicide attempt compared to non-bereaved controls.
Guldin et al., 2015 <sup>c</sup> Denmark, Sweden, Finland	population-based cohort study using nationwide data	Born between 1968-2008 (Denmark), 1973-2006 (Sweden), or 1987-2007 (Finland); bereaved between 6-months and 18 years old  51.27% male  Followed-up over 40 years, until own death, emigration, or end of study period (between 2008-2010)	parent	suicide ( $n=26,132$ ), accident (11,489), other ( $n=151,473$ ) Total exposed $n=189,094$  Not exposed (non-bereaved) $n=1,890,940$ (matched 1:10)	Cause of Death Register in each country measured suicide deaths using ICD-8/9 (950-959) and ICD-10 (X60-X84) codes	Risk of suicide elevated for bereaved children (any cause) compared to non-bereaved children, and remained high for at least 25 years after death. Highest for children whose parent died by suicide (IRR=3.44); death by other causes IRR=1.76.  Risk of suicide higher in suicide-bereaved compared to accident-bereaved offspring (IRR=1.82).  Risk particularly high for boys who had lost a mother, offspring bereaved before 6 years, and first-born children.

Jakobsen & Christiansen, 2011 <sup>a</sup> Denmark	nested case-control study using population-based registers	10-23 years ( $M=17.46$ , $SD=2.37$ )  21.3% male  Born between 1983-1989, last data update 2006	parent	Cases: attempted suicide ( $n=3,465$ )  Controls: not attempted suicide, matched on age and gender (20:1, $n=69,300$ )  Bereavement by suicide ( $n=27$ cases, $n=206$ controls), natural ( $n=141$ cases, $n=1776$ controls), accident ( $n=39$ cases, $n=366$ controls), homicide/violence ( $n=13$ cases, $n=113$ controls), unknown ( $n=35$ cases, $n=533$ controls), non-bereaved ( $n=3,213$ cases, $n=66,306$ controls)	Combined data from National Patient Register and Danish Psychiatric Central Registry measured suicide attempts presenting to hospital, using hospitalisation contact code E4 (suicide attempt), ICD-10 (S617-S619, X60-X84, T36-T60, or T65) or ICD-10 (X60-X84) codes.	All causes of parental death increased risk of suicide attempt compared to non-bereaved controls. No significant differences between causes of death, regardless of parental sex.  Losing both parents increased risk of suicide.  Risk of offspring suicide attempts sig increased for every time period (1 year to 5+ years).  Moderate-high paternal income was a protective factor following maternal deaths.
Kuramoto et al., 2010 <sup>e</sup> Sweden	population-based retrospective cohort study using national registries	0-17 years at time of parental death  suicide: 51.4% male accident unmatched: 48.6% male accident matched: 48.7% male  Followed-up over 30 years (between 1973-2003)	parent	suicide ( $n=23,447$ ), accident ( $n=14,993/19,345$ depending on matching)	National Inpatient Registry measured hospitalisation for confirmed or suspected suicide attempts using ICD-8/9 (E950-E959 and E980-E989) and ICD-10 (X60-X84 and Y10-Y34) codes	Maternal suicide associated with higher risk of offspring suicide attempt hospitalisation compared to maternal accidental death. Paternal suicide vs paternal accident deaths <i>ns</i> difference in hazard.  Offspring of maternal death higher relative risk of hospitalisation than offspring of paternal death ( $p<.05$ ).
Kuramoto et al., 2013 <sup>e</sup> Sweden	population-based retrospective cohort study using national registries	0-24 years at time of parental death (0-5: early childhood, 6-12: later childhood, 13-17: adolescence, 18-24: young adulthood)  suicide: 51.75% male	parent	suicide ( $n= 26,096$ ), unintentional injury ( $n=32,395$ )	National Inpatient Registry measured hospitalisation for confirmed or suspected suicide attempts using ICD-8/9 (E950-E959 and E980-E989) and ICD-10	Similar trajectories for both groups, but offspring of those who died by suicide had earlier onset of suicide attempt hospitalisation than offspring of those who died by unintentional injury.  Hazard of hospitalisation highest in first 2 years following parental suicide during

		unintentional injury: 51.50% male			(X60-X84 and Y10-Y34) codes	adolescence or young adulthood, 5 years for parental suicide during later childhood, and 20 years for parental suicide during early childhood.
		Followed-up over 30 years (between 1973-2003)				Daughters higher risk of hospitalisation than sons in early childhood or adolescence (not later childhood or young adulthood). Parental sex <i>ns</i> .
Li et al., 2014 <sup>c</sup> Denmark, Sweden, Finland	population-based cohort study using nationwide data	Born between 1968-2008 (Denmark), 1973-2006 (Sweden), or 1987-2007 (Finland); bereaved between 6-months and 18 years old  51.3% male  Followed-up until own death, emigration, or end of study period (between 2008-2010) - up to 42 years follow-up	parent	natural (diseases and medical conditions), unnatural (external causes including suicide)  Total exposed $n=189,094$	Cause of Death Register in each country measured suicide deaths using ICD-8/9 (950-959) and ICD-10 (X60-X84) codes	Elevated risk of all-cause mortality for almost all groups, but highest risk when offspring died from same cause as parent.  Higher risk of suicide and intentional self-harm death among offspring who lost a parent to suicide (MRR=2.78, $p<.05$ ) than non-suicide death (MRR=1.57, $p<.05$ ).
McIntosh & Kelly, 1992 USA	cross-sectional study	17-72 years ( $M=27.9$ , $SD=11.0$ )  31.6% male	family member or close friend	suicide ( $n=40$ ), accident ( $n=71$ ), natural ( $n=63$ )	Suicidal Behaviors Questionnaire measured past suicidal ideation and attempts	No significant differences between groups on feeling like killing oneself after the death, or thinking about or attempting suicide during one's lifetime ( <i>significance tests not presented</i> ).
Melhem et al., 2008 <sup>b</sup> USA	population-based case-control study	7-25 years  suicide: $M=13.6$ , $SD=3.7$ , 52% male; accident: $M=13.1$ , $SD=4.1$ , 46% male; natural: $M=13.4$ , $SD=3.4$ , 56% male;	parent [data on surviving caregiver s not presented ]	Cases: offspring bereaved by suicide ( $n=66$ ), accident ( $n=51$ ), sudden natural death ( $n=94$ )  Controls: non-bereaved offspring, frequency matched	Suicidal Ideation Questionnaire-JR (child) or Suicidal Ideation Questionnaire (adult) measured suicidal ideation	Similar risk for suicidal ideation among suicide-bereaved offspring compared to offspring bereaved by other sudden deaths; post-hoc tests showed suicide loss group sig different from non-bereaved controls.

		non-bereaved: $M=12.9$ , $SD=3.2$ , 50% male		by sex, age, and neighbourhood ( $n=183$ )		
		Interviewed 9 months after the death.				
Niederkrönte thaler et al., 2012 Sweden	matched case-control study using national registers	Died by suicide: $M=22.3$ ( $SD=3.7$ ), 72.4% male Attempted suicide: $M=21.1$ ( $SD=4.4$ ), 35.0% male  Born between 1973-1983; at least 10 years old at time of completed or attempted suicide; Up to 31 years at end of follow-up (assessed from 1983-2004 (suicide deaths) or 1983-2006 (suicide attempts))	parent	Cases: died by suicide ( $n=1,407$ ) or hospitalised for attempted suicide ( $n=17,159$ )  Controls: randomly selected alive person matched on sex, month, year and country of birth ( $\leq 10:1$ , $n$ =not stated)  Bereavement by suicide ( $n=44$ cases, $n=127$ controls), other causes ( $n=116$ cases, $n=694$ controls)	Causes of Death Register measured suicide deaths, and National Patient Register measured suicide attempts, using ICD-8/9 (E950-E959 and E980-E989) and ICD-10 (X60-X84 and Y10-Y34) codes	Parental suicide associated with higher risk of offspring suicide ( $OR=2.53$ ) than parental death from other causes ( $OR=1.30$ ), as well as higher risk of offspring suicide attempt ( $OR=1.75$ and $OR=1.27$ , respectively).  Risk of suicide following parental suicide increased when exposed at a younger age (0-10 vs >10), but suicide attempt risk increased when exposed at older age.
Pfeffer et al., 2000 USA	cross- sectional study	6-13 years  suicide: $M=9.5$ , $SD=2.4$ , 36% male cancer: $M=10.4$ , $SD=1.9$ , 51% male	parent	suicide ( $n=11$ families with 16 children), cancer ( $n=57$ families with 64 children)	Children's Depression Inventory item on suicidal ideation measured suicidal ideation in the past two weeks	Approximately one third of both suicide and cancer bereaved groups reported suicidal ideation, similar to community normative sample. ( <i>significance tests not presented</i> )
Pirelli & Jeglic, 2009 USA	cross- sectional study	$M=20.0$ years, $SD=3.97$  25.3% male	immediate family, non-immediate family, friend, or acquaintance	suicide, chronic disease, acute disease, accident, murder Total $n=396$ (individual group numbers not reported)	Self-report measure developed for this study, including questions on how many times participant has thought of "committing suicide or attempted suicide" ever and in the past year  Beck Scale for Suicide Ideation measured suicidal	Type of death experienced did not predict suicidal ideation.  Total suicide deaths experienced (positively) and acute deaths experienced (negatively) predicted history of suicide attempt. Other causes of death <i>ns</i> .

Wilcox et al., 2010 Sweden	population-based retrospective cohort study using national registries	0-25 years at time of parental death (0-12: childhood, 13-17: adolescence, 18-25: young adulthood)  suicide: 52% male accident: 51% male other: 51% male non-bereaved: 51% male	parent	suicide ( $n=44,397$ ), accident ( $n=41,467$ ), other ( $n=417,365$ ), non-bereaved ( $3,807,867$ )	ideation or attempts in the previous week  Cause of Death Register measured suicide deaths using ICD-8/9 (E950-E959) and ICD-10 (X60-X84) codes  Hospital Discharge Register measured psychiatric hospitalisations for suicide attempt using ICD-8/9/10 codes above	Suicide of a friend (but not other relationships) predicted history of suicide attempt.  Suicide-bereaved offspring at increased risk of suicide compared to offspring of alive parents (adjusted IRR=1.9 across all ages); no increased risk among offspring of other causes of parental death compared to non-bereaved.  Increased risk of suicide when offspring bereaved by suicide during childhood or adolescence (adjusted IRR=3.0 and 3.1, respectively) compared to non-bereaved youth, but not young adulthood.  All bereaved groups were at increased risk for hospitalisation for suicide attempt compared with offspring of alive parents, but offspring of those who died by suicide at greater risk (adjusted IRR=1.7, vs accidental, IRR=1.4, and other deaths, IRR=1.3).
Yu et al., 2017 Denmark, Sweden	population-based cohort study using nationwide data	Born between 1973-2004 (Denmark), or 1973-2006 (Sweden); bereaved between 6-months and 18 years old  Exposed: 51.5% male <i>Unexposed: 51.3% male</i>  Followed-up until own death, emigration, or end of study period (2009 in	sibling	neoplasms; endocrine, nutritional and/or metabolic diseases; diseases of the nervous system; diseases of the circulatory system; transportation accidents; suicide and intentional self-harm; other diseases  Total exposed $n=55,818$  <i>Total unexposed (non-bereaved): 4,949,211</i>	Cause of Death Register in each country measured suicide and intentional self-harm deaths using ICD-8/9 (950-959, 960-969) and ICD-10 (X60-X84, Y10-Y34) codes	Suicide or intentional self-harm mortality risk increased for individuals whose sibling died of suicide (MRR=8.01) compared to non-bereaved, but <i>ns</i> when sibling died of other causes.

Denmark, 2008 in  
Sweden)

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*Note.* Similar superscripts are used for multiple publications reporting on the same or a subset of the same sample. Terminology (e.g., regarding SSHTBs) kept consistent with the original publication, which may include outdated terminology on this topic (e.g., *DSH*). Statistics are presented for adjusted analyses wherever possible. ICD = International Classification of Diseases. *M* = Mean. *SD* = Standard Deviation. OR = Odds Ratio. MRR = Mortality Rate Ratio. IRR = Incidence Rate Ratio. DSH = Deliberate self-harm.

### ***3.3.3 Risk of Bias***

A summary of the risk of bias ratings is presented in Table 3.2. Ratings in the selection category were highest among case-control and cohort studies, given that the majority were based on nationwide data with large, representative samples and low risk of bias. Scores on comparability were mixed across studies; most controlled for at least one potentially confounding variable, though several did not control for depression or depressive symptoms, which was identified as the most important factor for the risk of bias assessment given its strong association with SSHTBs (Hawton & van Heeringen, 2009). It is worth noting that one study which was awarded an additional star for controlling for depression actually controlled for “psychiatric history” (Christiansen et al., 2011), which was assumed to include depression. Cross-sectional studies scored lowest in the assessment of exposure or outcomes as they were often based on self-reports which yielded lower ratings; again, case-control and cohort studies scored highly in this category given their use of record linkage with long follow-up periods and low risk of attrition.

**Table 3.2***Risk of Bias Assessments of Included Studies According to Study Design*

<b>Citation</b>	<b>Selection</b>	<b>Comparability</b>	<b>Exposure/ Outcome</b>	<b>Total</b>
<b>Case-Control</b>				
Agerbo et al., 2002	4	2	3	9
Burrell et al., 2017 <sup>d</sup>	4	1	3	8
Burrell et al., 2018 <sup>d</sup>	4	1	3	8
Burrell et al., 2020	4	1	3	8
Cheng et al., 2014	4	1	3	8
Christiansen et al., 2011 <sup>a</sup>	4	1	3	8
Jakobsen & Christiansen, 2011 <sup>a</sup>	4	1	3	8
Melhem et al., 2008 <sup>b</sup>	2	1	0	3
Niederkröthaler et al., 2012	4	1	3	8
<b>Cohort</b>				
Brent et al., 2009 <sup>b</sup>	3	0	2	5
Cerel et al., 1999	3	0	1	4
Guldin et al., 2015 <sup>c</sup>	4	1	3	8
Kuramoto et al., 2010 <sup>e</sup>	4	1	3	8
Kuramoto et al., 2013 <sup>e</sup>	4	1	3	8
Li et al., 2014 <sup>c</sup>	4	1	3	8
Wilcox et al., 2010	4	1	3	8
Yu et al., 2017	4	1	3	8
<b>Cross-Sectional</b>				
Andriessen, Hadzi-Pavlovic, et al., 2018	3	0	2	5
McIntosh & Kelly, 1992	2	1	1	4
Pfeffer et al., 2000	3	1	2	6
Pirelli & Jeglic, 2009	1	0	2	3

*Note.* Similar superscripts are used for multiple publications reporting on the same or a subset of the same sample. Case-control and cohort studies score a maximum of nine stars, and cross-sectional studies a maximum of 10 stars, across selection, comparability, and ascertainment of exposure/outcome categories; higher scores indicate lower risk of bias.

### 3.3.4 Synthesis of Results

The included studies suggest mixed evidence in relation to the increased risk of SSHTBs among adolescents bereaved by suicide compared to other deaths, depending on the outcome being measured. Findings are presented separately for: deaths by suicide, hospitalisations for self-harm or suicide attempts, and self-reported suicidal/self-harm ideation and behaviours. Within each of these three categories, evidence regarding the influence of bereavement circumstances, characteristics of the person who died, and

characteristics of the bereaved individual are discussed where such evidence exists. While additional outcomes may have been presented in the literature, priority is given to reporting those which relate to the aims of this review.

### ***3.3.5 Association between bereavement and subsequent suicide***

Seven papers measured suicide deaths, and two combined suicide deaths and suicide attempt hospitalisations. All were derived from population-based national registers, either case-control or cohort in design, and thus utilised Cause of Death or medical registers employing ICD-8/9/10 codes to determine suicides. As such, they obtained relatively large sample sizes and high statistical power, with low risk of bias. The majority looked at the effects of parental loss, with one (Yu et al., 2017) investigating sibling death, and one (Agerbo et al., 2002) both parental and sibling death.

#### **3.3.5.1 Suicide Outcomes: Bereavement Characteristics.**

All studies found that experiencing an immediate family member's death by suicide was associated with a significantly higher risk of suicide mortality compared to bereavement by other causes, after controlling for a range of confounding variables. Exposure to other causes of death was usually also associated with an elevated risk of dying by suicide, but to a lesser magnitude than following a suicide loss (Agerbo et al., 2002; Burrell et al., 2017; Burrell et al., 2018; Cheng et al., 2014; Guldin et al., 2015; Li et al., 2014; Niederkrotenthaler et al., 2012).

After adjusting for parental psychiatric hospitalisations and criminal convictions, Wilcox et al. (2010) found that offspring of those who died by suicide had an almost doubled risk of dying by suicide compared to non-bereaved youth (IRR=1.9), while offspring of those who died by accident or other causes were not at elevated risk of suicide. The authors also

examined suicide attempt risk, and found that all causes of parental death were associated with hospitalisations for suicide attempt, but those exposed to parental suicide (IRR=1.7) were at higher risk compared to those exposed to accidents (adjusted IRR=1.4) or other deaths (IRR=1.3).

In a sample of adolescents in Taiwan, Cheng et al. (2014) found a significantly higher risk of suicide following paternal suicide compared to non-suicide death (OR=5.38 vs OR=1.88,  $p=.015$ ), as well as a higher but non-significant increased risk following maternal suicide compared to non-suicide death (OR=6.59 vs OR=1.94, *ns*). The authors controlled for birth characteristics and family socio-economic factors, but did not control for familial psychiatric disorders, which may explain the higher risk than seen in similar studies which did account for this potential confounder (Agerbo et al., 2002; Guldin et al., 2015; Wilcox et al., 2010).

Some studies demonstrated a higher risk of mortality when offspring died from the same cause as their parents. Li et al. (2014) looked at the impact of parental death in childhood or adolescence in three Nordic countries (Denmark, Sweden, and Finland). Losing a parent to any cause was associated with an increased all-cause mortality, but the highest risks were evident among concordant causes. The mortality risk ratio (MRR) among offspring who died by suicide was 2.78 when their parents had died by suicide, compared to 1.57 when their parents had died by non-suicide. Additionally, those exposed to parental suicide were more likely to die by any cause than people exposed to other deaths.

**Cumulative exposure to death.** A potential dose-response relationship was found such that the risk of offspring suicide was intensified when both parents died compared to only one parent (Burrell et al., 2017; Burrell et al., 2018). Sub-group analyses of specific causes of death were not examined with regards to cumulative exposures.

**Time since death.** The consequences of suicide bereavement may persist in the short- and long-term. Li et al. (2014) found an increased risk of offspring mortality following parental death by all causes until early or mid-adulthood, irrespective of socioeconomic differences. Burrell et al. (2018) found that suicide risk was elevated from 1 year after parental death to over 15 years, but not within the first year post-death. They suggest that individuals may experience immediate difficulties from early feelings of trauma and loss, and suffer longer-term consequences as a result of losing a caregiver and an important attachment figure during a critical stage of development (Burrell et al., 2018).

### 3.3.5.2 Suicide Outcomes: Characteristics of the Deceased Person.

**Sex.** The evidence is somewhat contradictory regarding the role of parental sex. Burrell et al. (2017) found that parental death often led to increased risk of suicide regardless of parental sex. Offspring who lost a father (IRR=2.30, 95% CI=1.10-4.80) or a mother (IRR = 4.75, 95% CI=2.10-10.80) were both at elevated risk of dying by suicide, with confidence intervals overlapping. Similar findings were reported in Burrell et al. (2018), and also following any parental death in other Nordic countries (Li et al., 2014). On the other hand, a higher risk of suicide was found among those bereaved by maternal than paternal suicide by Agerbo et al. (2002). Among a wide range of familial, psychiatric and socioeconomic risk factors, paternal death by suicide (IRR=2.30, 95% CI=1.10-4.80), maternal death by suicide (IRR=4.75, 95% CI=2.10-10.80), and maternal death by other causes (IRR=2.06, 95% CI=1.02-4.19) were found to be associated with an increased risk of dying by suicide, after adjusting for age, sex, calendar time, and individual and family history of admission for mental illness. The IRR following maternal suicides was higher than paternal suicides, as well as other maternal bereavements, but the confidence intervals overlapped.

Among 15-19 year old adolescents, Cheng et al. (2014) found that risk of own suicide in males was significantly associated with paternal (OR=8.23, 95% CI=2.96-22.90) but not maternal (OR=3.50, 95% CI=0.41-30.13) suicide, while risk in females was associated with maternal (OR=9.71, 95% CI=1.89-49.94) but not paternal (OR=2.42, 95% CI=0.30-19.57) suicide. However, the difference in risk after losing a father compared to a mother was not statistically significant (for both sons and daughters).

**Relationship.** Death of a parent was consistently associated with offspring suicide, and only two studies looked at the impact of a sibling death. Yu et al. (2017) found that all-cause mortality was increased over the next 37 years following sibling death, irrespective of age at bereavement and type of death. This was particularly strong within the first year and among same-sex and close aged siblings. Risk of death by suicide or intentional self-harm was eight times higher for people whose sibling died by suicide (MRR=8.01, 95% CI=5.34-12.00) compared to non-bereaved siblings; other causes of loss were non-significant (MRR=1.04, 95% CI=0.76-1.43). On the other hand, Agerbo et al. (2002) found that suicide risk was elevated following parental death but not sibling death, after controlling for age, sex, calendar time, and individual and family history of admission for mental illness. However, sibling psychiatric history was found to be a risk factor for suicide.

### 3.3.5.3 Suicide Outcomes: Participant Characteristics.

**Age.** The impact of a death may differ by the developmental period during which it occurred, although there are contradictions within the literature regarding what age places a child most at risk. Wilcox et al. (2010) showed that offspring suicide risk was particularly pronounced when they were bereaved by suicide during childhood or adolescence (adjusted IRR=3.0 and 3.1, respectively) compared to those not bereaved, while young adults were not at increased risk. Li et al. (2014) found that all-cause mortality was elevated for all age

groups who were bereaved, although the risk of unnatural deaths shortly after the bereavement was particularly high for those who were younger (under 5) when bereaved. Guldin et al. (2015) found a more than threefold risk of suicide among children whose parent died of suicide (IRR=3.44), although it was also elevated for those bereaved by other causes (IRR=1.76). Risk was highest among children who had been bereaved under the age of six, boys who lost a mother, and first-born children, and the elevated risk remained for at least 25 years. Niederkrotenthaler et al. (2012) found that exposure to parental suicide from 0-10 years was associated with increased risk of dying by suicide, while exposure at an older age (over 10 years) was associated with increased risk of attempting suicide. Conversely, exposure to non-suicide deaths increased risk of offspring suicide and attempted suicide only for those above 10 years old, and the odds ratios for both outcomes were lower than those following parental suicide.

Among 11-64 year olds who died by suicide, Burrell et al. (2018) found that suicide risk was increased for those bereaved by any external cause at all ages until 44 years. However, risk was especially high when the bereavement occurred between 10 to 17 years; OR=2.24, 95% CI=1.75-2.86. In a separate analysis, among those under 25 years at the time of their suicide, only parental death by suicide (not transport accidents or other external deaths) was significantly associated with suicide risk (OR=4.18, 95% CI=2.79-6.27), and the odds were higher than when bereaved at an older age (OR=2.63, 95% CI=2.18-3.18). There was no effect of offspring gender, and no interaction between gender of the deceased parent and bereaved offspring. In contrast Burrell et al. (2017) found an increased risk of suicide mortality following parental suicide regardless of offspring age at bereavement (between 0-65 years), and regardless of age group of offspring at the time of their own suicide (12-29 year olds vs 30-65 year olds).

### ***3.3.6 Association between bereavement and subsequent hospitalisation for self-harm (irrespective of intent)***

In addition to the two papers discussed above which measured both suicide deaths and hospital-presenting suicide attempts (Niederkrötenhaler et al., 2012; Wilcox et al., 2010), five further studies investigated presentations to hospital for self-harm or suicide attempt. All were case-control or cohort in design, derived their data from national registers, and scored fairly low on risk of bias. All investigated the impact of a parent's death, and were based in Scandinavian countries (Norway, Denmark or Sweden).

#### **3.3.6.1 Hospitalisation Outcomes: Bereavement Characteristics.**

There were mixed findings in terms of hospitalisations for self-harm or suicide attempt. Several studies looked at all-cause mortality across the population, and three looked exclusively at suicide compared to other external causes of death. All controlled for a range of potential confounders from registry data, although Jakobsen and Christiansen (2011) only controlled for age and sex.

Burrell et al. (2020) compared records of hospitalisations for self-harm among people over 10 years old who were bereaved by suicide, external causes (transport accident, other accident, other external cause), or matched non-bereaved controls. Among individuals treated for self-harm, both those who had lost a parent to suicide (OR=2.32, 95% CI=1.92-2.80) and other accident (OR=1.79, 95% CI=1.38-2.33) had a greater risk of hospitalisation compared to non-bereaved controls, although the confidence intervals of the two bereaved groups overlapped. Transport accidents and other external causes of bereavement were not associated with an increased risk, and suicide-bereaved offspring were at significantly higher risk than those bereaved by transport accidents. Jakobsen and Christiansen (2011) showed that all causes of death studied (suicide, accident, homicide, and violence) were associated

with adolescent suicide attempt risk, with odds ratios ranging from 1.64 to 2.70, and there were no significant differences between groups. However, the small number of suicide attempts per each cause of parental death may account for the lack of significance in the results (e.g., only 13 people who attempted suicide were bereaved by homicide or violence, and 27 by suicide).

Christiansen et al. (2011) found that parental death by any cause increased risk for offspring suicide, as did other factors such as parental history of non-fatal suicide attempts, psychiatric illness, and low income. Suicide bereavements were associated with a higher incidence rate ratio than other causes of death, both in males (IRR=4.71 vs IRR=1.56) and females (IRR=2.25 vs IRR=1.73), although the confidence intervals only overlapped for females. It is worth noting that the group sample sizes were not extensive; for instance, only eight cases who attempted suicide had a parent who died by suicide. The authors also found a cumulative effect of parental risk factors on offspring risk of suicide.

**Cumulative exposure to death.** The loss of both parents was associated with a more than threefold (OR=3.09) increased risk of hospitalisation in Burrell et al. (2020), higher than the risk following the loss of only one parent (OR=1.76 and OR=2.00 for fathers and mothers, respectively). In similar findings, Jakobsen and Christiansen (2011) found that losing both parents was associated with a much higher risk of offspring suicide attempt compared to losing one parent (RR=4.66 vs 1.71). However, the sample of people bereaved by both parents was small in both studies.

**Time since death.** A common finding was that the highest risk of hospitalisation exists in the short-term following the death, particularly within the first two years. Jakobsen and Christiansen (2011) found that the risk was significantly higher among bereaved (combined groups) compared to non-bereaved individuals across all time periods (from up to one year to more than five years), although the highest risk was within the first year

(OR=2.06) and gradually decreased with each increasing period (e.g., OR=1.65 at more than five years). Kuramoto et al. (2013) showed that risk for suicide attempt hospitalisation was highest in the first two years following adolescent or young adult exposure to suicide, and gradually decreased thereafter (followed-up over 30 years). The largest risk of hospitalisation for self-harm in Burrell et al.'s (2020) study was seen within the first five years following the death (OR=15.61), and remained significant until 10 years post-loss, but not from 10-15 years after.

### **3.3.6.2 Hospitalisation Outcomes: Characteristics of the Deceased**

#### **Person.**

**Sex.** Three studies found no effect of a deceased parent's sex on risk of hospitalisation for self-harm or suicide attempt (Burrell et al., 2020; Jakobsen & Christiansen, 2011; Kuramoto et al., 2013). On the other hand, Kuramoto et al. (2010) found that offspring exposed to maternal suicide had an almost doubled risk of hospitalisation for suicide attempt compared to those exposed to maternal accident (Hazard Ratio=1.80, 95% CI=1.19-2.74), however no significant differences were found between paternal suicide or accidental deaths.

### **3.3.6.3 Hospitalisation Outcomes: Participant Characteristics.**

**Age.** No clear patterns emerged from the data regarding the impact of age on risk of hospitalisation. Wilcox et al. (2010) showed that those exposed to parental suicide during childhood (0-12 years) were more likely to attempt suicide (adjusted IRR=1.9) than adolescents or young adults (adjusted IRR=1.6 for both). Kuramoto et al. (2013) looked at time to hospitalisation for suicide attempts among people who had lost a parent prior to the age of 25. Both those who had been exposed to parental suicide or unintentional injury showed similar trajectories of risk; however, offspring of those who died by suicide had

earlier onset of hospitalisation. Those bereaved in early childhood (0-5 years) showed an elevated risk that continued to increase for 20 years, those bereaved in later childhood (6-12 years) showed an increase in risk over the next five years, and those bereaved during adolescence (13-17 years) or young adulthood (18-24 years) showed the highest risk within the first 2 years after the death. These findings support the view of a critical period shortly after the death, but also that earlier bereavements have a more detrimental effect.

**Sex.** Kuramoto et al. (2013) found that female offspring who had lost a parent to suicide were more likely to be hospitalised for suicide attempt than male offspring, but only when they were bereaved during early childhood or adolescence (not later childhood or young adulthood).

### ***3.3.7 Association between bereavement and subsequent self-reported suicidal ideation or self-harm (irrespective of intent)***

Three studies measured suicidal ideation only, while a further four measured a combination of suicidal ideation and self-harm. As all measured self-reported outcomes, they were prone to response and recall bias, and many were cross-sectional and thus unable to make inferences about causality. Risk of bias also varied greatly between studies, and while the majority adjusted for a variety of potential confounders, four studies did not report any such adjustments (Andriessen, Hadzi-Pavlovic, et al., 2018; Brent et al., 2009; Cerel et al., 1999; Pirelli & Jeglic, 2009).

#### **3.3.7.1 Self-Reported Outcomes: Bereavement Characteristics.**

Suicide bereavement was contrasted with a range of comparison groups including sudden deaths, natural deaths, accidents, homicide, cancer, chronic and acute diseases, or non-suicide causes more generally. Few differences were apparent in risk of suicidal ideation;

only one of the seven studies (Andriessen, Hadzi-Pavlovic, et al., 2018) reported possible differences between the bereaved groups. Andriessen, Hadzi-Pavlovic, et al. (2018) measured suicidal ideation and self-harm using two items from a novel Adolescent Grief Inventory regarding thoughts or behaviours at one month after the death, and in the past month. Compared to those bereaved by natural deaths, adolescents bereaved by suicide reported higher scores at one-month post-loss on an 'anxiety and self-harm' factor (items were combined in a factor analysis as they loaded onto one factor). However, this effect was non-significant for responses concerning the past month. As this study combined ideation and behaviours into one composite measure, it is not possible to determine whether ideation specifically was elevated among the suicide bereaved individuals.

Mixed results were found regarding self-reported self-harm or suicide attempts. Two papers found no significant differences between bereaved groups (Cerel et al., 1999; McIntosh & Kelly, 1992), while another two found that suicide bereaved young people were more likely to endorse a history of self-harm or suicide attempts (Andriessen, Hadzi-Pavlovic, et al., 2018; Pirelli & Jeglic, 2009). As noted above, Andriessen, Hadzi-Pavlovic, et al. (2018) reported that suicide-bereaved adolescents scored higher on an anxiety and self-harm factor in the first month following the death than the natural death bereaved group, although the composite measure used precludes conclusions on specific risk of behaviours rather than thoughts. Pirelli and Jeglic (2009) measured both thoughts of suicide and suicide attempts using a measure created by the study authors, and the Beck Scale for Suicide Ideation (Beck et al., 1988). Although they did not control for potential confounding (and risk of bias was deemed to be high), results showed no differences in suicidal ideation between suicide and other bereaved groups (chronic disease, acute disease, accident, and murder; group sizes not reported). However, those reporting a suicide attempt were more likely to have been bereaved by suicide and less likely bereaved by acute disease. Furthermore, it was

the suicide of a friend, and not a family member or acquaintance, which accounted for this relationship.

**Time since death.** Time since death varied from 1 month to up to 34 years, with studies of shorter time periods (i.e., within the past two years) less likely to find group differences than those measuring longer periods. Two studies were longitudinal. Cerel et al. (1999) compared grief reactions, psychiatric symptomatology, and psychosocial functioning of offspring at 1, 6, 13, and 25 months following the death. Findings revealed no significant differences regarding suicidality (measured by suicidal ideation, intent, plans, and attempts), as well as several other measures (e.g., posttraumatic stress symptoms, depressive symptoms, psychosocial functioning, etc.), although the suicide bereaved group were more likely to experience anxiety, anger, and shame, and less relief and acceptance. However, the risk of bias in this study was high, and it is worth highlighting the small (and perhaps unrepresentative) sample, the use of unvalidated measures, and a large number of statistical analyses that did not control for potential confounders or correct for multiple comparisons.

Melhem et al. (2008) looked at families with offspring between 7-25 years in which one parent had died by suicide, accident, or sudden natural death, as well as a control group of matched, non-bereaved offspring. Participants were interviewed nine months after the death, and completed versions of the Suicidal Ideation Questionnaire (Reynolds, 1989; Reynolds, 1991). After controlling for demographic, familial and clinical risk factors, suicide bereaved offspring were found to show a similar risk for suicidal ideation compared to other sudden deaths ( $p=.02$ , where  $\alpha$  was significant at .008). These findings suggest that in the short term, outcomes may be similar for suicide and other sudden death bereaved offspring. However, the sample size was small and possible selection bias was reflected in the high risk of bias rating. In a follow-up of this cohort at 21 months, Brent et al. (2009) continued to find

no significant differences between groups on the measure of suicidal ideation, although differences were noted for other outcomes (e.g., depression, substance use disorder, etc.).

### **3.3.7.2 Self-Reported Outcomes: Characteristics of the Deceased Person.**

**Sex.** No studies measuring self-reported outcomes found significant gender differences, although such analyses were not always conducted or reported. Although they did not find significant group differences in relation to suicidal ideation between different bereaved groups, Brent et al. (2009) reported that depression between nine and 21 months post-loss was associated with the death of a mother rather than a father.

**Relationship.** Four studies investigated the death of a parent, and three looked at a combination of family members, friends or acquaintances. None of those looking at parental death reported significant differences between suicide and other bereaved groups in terms of suicidal ideation (Brent et al., 2009; Melhem et al., 2008; Pfeffer et al., 2000), nor ideation or attempts (Cerel et al., 1999). Among those investigating other relationships, Pirelli and Jeglic (2009) only found an association with suicide attempts (and not suicidal ideation) among friends, and not family members or acquaintances. Andriessen, Hadzi-Pavlovic, et al. (2018) found that those who were not blood-related to the person who died had significantly higher scores on an anxiety-self-harm factor compared to other family members (not first-degree relatives) in the first month after the death, though no differences were observed when asked about the past month. McIntosh and Kelly (1992) did not report comparisons between those bereaved by family members or friends.

### **3.3.7.3 Self-Reported Outcomes: Participant Characteristics.**

**Age.** Five studies included individuals with a broad age span that covered the adolescent years (12-18 years), while two focused on participants who were slightly older

comprising university student samples (McIntosh & Kelly, 1992; Pirelli & Jeglic, 2009). No clear age differences were apparent. Among the younger age groups, Pfeffer et al. (2000) examined prepubescent children and young adolescents aged 6-13, and found similar rates of suicidal ideation between suicide and cancer bereaved children. However, the sample size was small ( $n=16$  in the suicide group and  $n=64$  in the cancer group), and significance tests were not presented. Other studies with younger samples also reported no significant differences among groups.

Andriessen, Hadzi-Pavlovic, et al. (2018) found differences in an anxiety and self-harm factor (with those bereaved by suicide more likely to exhibit higher scores compared to those bereaved by natural deaths) among participants aged 12-28, although the mean age in this study was 19.9 years. Although they did not specify the age range of their sample, Pirelli and Jeglic (2009) reported data from participants with a mean age of 20 years ( $SD=4.0$ ), with their sample concluding mixed findings (no differences were found in relation to suicidal ideation, but suicide attempts were more common among those bereaved by suicide compared to acute disease).

Across older ages, McIntosh and Kelly (1992) reported results using the Suicidal Behaviors Questionnaire (Linehan & Nielsen, 1981), which measured past suicidal ideation and attempts. No differences were noted between bereaved groups on this measure, although significance tests were not presented. Furthermore, the sample was not necessarily representative, the overall closeness of the relationships were rated as moderate so may not reflect reactions to the loss of a more intimate relationship, and participants recalled deaths from an unlimited period of time ago (up to 34 years, despite controlling for this variable), suggesting possible recall bias.

### **3.4 Discussion**

#### **3.4.1 *Summary of Findings***

This review aimed to examine the literature regarding risk of SSHTBs among adolescents who have experienced a death. The aims were to: (1) determine whether suicide bereavement leads to an elevated risk of SSHTBs compared to other modes of death, (2) to examine factors which may help explain this potential relationship, and (3) to explore the measures used to ascertain outcomes in the literature. Following a systematic approach, 21 papers met inclusion criteria and provided evidence regarding outcomes following bereavement. Overall, the evidence was robust as to the increased risk of suicide mortality following parental suicide, and tentative evidence was found of increased risk following sibling suicide. Hospitalisations for self-harm were somewhat more common among some suicide bereaved adolescents compared to other groups, but there were contradictory findings. With self-reported outcomes, no differences were apparent in risk of suicidal ideation, while self-reported behaviours showed mixed evidence between those bereaved by suicide or other deaths.

These findings are largely consistent with conclusions by Hill et al. (2020) in their recent review, which indicated an elevated risk of suicide and suicide attempts but not suicidal ideation among those exposed to suicide. The current review found that several factors were identified as being relevant to adjustment following a death. Cumulative exposures to death were consistently associated with more negative outcomes. The impact of a double loss for adolescents may lead to additional changes in childcare routines or residence, which complicate adjustment after the loss (Burrell et al., 2017). On the whole, experiencing death at a younger age (especially in childhood) seems to be more detrimental, which supports the idea of sensitive life periods, with increased vulnerability coinciding with puberty, biopsychosocial changes, and higher impulsivity and emotional immaturity (Ben-

Shlomo & Kuh, 2002; Burrell et al., 2018; Niederkrotenthaler et al., 2012). This also points to an environmental or developmental component to suicide risk, rather than just genetic (Wilcox et al., 2010), and highlights the importance of social and relational circumstances in dealing with bereavement and possibilities for early intervention. Outcomes measured soon after the death, particularly within the first two years, appear to be most deleterious, although some studies showed that risk of SSHTBs persisted for decades. Inconsistent evidence was found regarding the effect of parental sex, with a small number of studies noting a more detrimental effect of maternal loss (e.g., Agerbo et al., 2002; Kuramoto et al., 2010), while one study found an elevated risk among same-sex parent-child dyads (Cheng et al., 2014). This is consistent with review findings by Geulayov et al. (2011), suggesting that maternal suicidal behaviour and younger exposure to parental suicidal behaviour are associated with greater offspring risk. This gender effect may be attributed to losing the parent that is generally the primary caregiver (Kuramoto et al., 2010), while Cheng et al. (2014) suggest that the death of a same-sex parent may represent the loss of a stronger attachment figure and role model from which to learn coping skills, which may include self-harm. In terms of kinship, loss of a parent, and often a sibling, was overwhelmingly associated with poor outcomes, while studies of non-familial relationships were inconclusive.

### ***3.4.2 Possible Mechanisms***

As noted in Chapter 2.4, the increased risk of suicide among adolescents bereaved by a parent or sibling may be explained by familial clustering based on shared genetic vulnerabilities for suicidal behaviour (Burrell et al., 2017; Guldin et al., 2015; O'Reilly et al., 2020). This may include transmission of mental health problems, neurocognitive deficits, and personality traits reported to influence suicidal behaviour (Burrell et al., 2020). Brent and Melhem (2008) noted that traits such as impulsive aggression may run in families, and

adverse family environments (such as those involving abuse and maltreatment) preceding the death may similarly contribute to familial aggregation of suicide.

Significant associations were not only seen for familial bereavements. Andriessen, Hadzi-Pavlovic, et al. (2018) found that those bereaved by a family member or friend's suicide scored higher on a factor measuring anxiety and self-harm than those bereaved by other causes, and Pirelli and Jeglic (2009) found that only a friend's suicide (rather than an immediate or non-immediate family member or acquaintance) was predictive of post-loss suicide attempts. Peer influence on risk of suicidal thoughts and intentions may be explained by assortative relating, with vulnerable adolescents more likely to socialise with fellow peers who are similarly at risk, and their increased vulnerability is exacerbated by shared life stresses (Joiner, 2003). Research on social modelling of behaviours applies to both familial and peer relationships (De Leo & Heller, 2008). It may be that suicide becomes a learned coping style and viable option to deal with stress after witnessing the suicidal behaviour of others (Jeglic et al., 2005), and the concept of modelling applies to behaviours rather than internal processes.

In their recent paper reviewing evidence of clustering of suicides in childhood and adolescence, Hawton et al. (2020) propose that, in addition to social transmission and assortative relating, descriptive norms (perceptions of suicidal behaviour being widespread) and social cohesion (especially related to shared ideas and attitudes) are likely to account for this effect. Lastly, the stigma surrounding suicide, applicable to both familial and non-familial bereavements (Jordan, 2008; Pitman et al., 2014; Pitman et al., 2016b; Sveen & Walby, 2008), may explain why some suicide-bereaved individuals show poorer outcomes, and may be reflected in a reluctance to seek help when needed (compounded by a lack of information about help seeking and access to support more broadly). Hua et al. (2020) reviewed studies that employed a theory to explain the relationship between childhood

parental bereavement and subsequent suicidal behaviour in adulthood. Overall, the theories used tend to cover a range of factors, where in actuality, it is likely that multiple biopsychosocial factors interact to influence suicide risk following bereavement.

### **3.4.3 Measures**

There was wide variability across the literature in terms of measures used to capture SSHTB outcomes. Data from national registers, which measured both suicide deaths and hospitalisations for self-harm or suicide attempt, offered extensive amounts of data with high validity and statistical power, and the opportunity to follow-up individuals over lengthy periods. Research using population registers allows for the exploration of rare exposures such as suicide, and the data are truly representative of the population in those countries, thus posing limited risk of selection bias (Thygesen & Ersbøll, 2014). Potential inaccuracies in death registrations may however underestimate the number of people who die by suicide, and given that suicide has a low base rate, some analyses (e.g., stratified by sex or other factors) may still be underpowered. Register data is also limited in information on family environment, such as whether the individuals in question were residing together, and other potential factors that intensify or attenuate the relationship between bereavement and SSHTBs. For instance, circumstances of the death, the quality and closeness of the relationship, the remaining social supports, and individuals' coping mechanisms may all be important but not captured in routine register data (Burrell et al., 2017). It is also worth noting that research measuring hospitalisations for self-harm only capture the more severe cases which receive clinical attention. As evidence consistently shows, community-occurring self-harm is particularly prevalent among young people (Geulayov et al., 2018), so more high quality studies are needed with adolescents not presenting to clinical settings.

Research reporting self-reported outcomes (ideation and self-harm) relied on data from interviews or questionnaires, and suffered from the common pitfalls of self-report (e.g., recall bias or socially desirable responding). Many of these studies used validated tools, but a few used unvalidated measures or did not describe the measures appropriately. Several studies also failed to adjust for multiple comparisons or potential confounding, and given their generally small sample sizes with low statistical power, analytical approaches were at times questionable. Unlike register-based studies which assessed the sequelae of immediate familial bereavement, studies on self-reported outcomes examined mixed relationships such as peer and non-immediate familial deaths. This may explain the divergent findings regarding increased risks of self-harm, and further research with larger representative samples is necessary to explore this further. Finally, several self-report studies tended to be cross-sectional in design, so conclusions about causality are limited.

In sum, national register data can be valuable for reliably measuring rare outcomes across a large population, but lacks detailed information on environmental and social factors which may impact bereavement experiences. Research which relies on self-report measures should make use of validated tools, adjust for multiple comparisons and potential confounding, and address the gap in prospective designs which measure longer-term outcomes.

#### ***3.4.4 Strengths and Limitations***

This systematic review explored the literature on the experiences of adolescents who have been bereaved by suicide compared to other causes. Previous reviews took a broader focus in terms of exposure (e.g., including non-bereaved controls) or outcomes (not limited to SSHTBs) focused on a wider age range, or were published several years ago. A comprehensive search aimed to capture all the published literature on the topic. However, it is

possible that some studies were inadvertently excluded, and publication bias may be an issue as the grey literature was not searched. Furthermore, as studies needed to be published in English, this may have introduced bias by excluding relevant research published in other languages. Studies looking at exposure to suicides in the media were excluded so as to focus on the impact of close bereavements. Nonetheless, research shows that suicide clusters in young people may result from social transmission following media-reported suicides (Hawton et al., 2020), which could not be captured in this review. Furthermore, research on the death of personally known individuals may not necessarily constitute close relationships (e.g., estranged biological parents identified from national record studies). Recent research also highlights distinct processes in the development of suicidal thoughts and behaviours (e.g., Klonsky & May, 2015; O'Connor & Kirtley, 2018; Van Orden et al., 2010); in this review, studies which captured a range of outcomes were included, which may account for some of the inconsistent findings. Due to constraints on time and resources, only a portion of the data were double-extracted and assessed for risk of bias. However, both data extraction and risk of bias tools were pre-piloted, and no major disagreements were raised.

The NOS used for assessing risk of bias within studies has been used widely in systematic reviews of non-randomised studies (Quigley et al., 2019; Seehra et al., 2016). It has been deemed accessible, valid and reliable, and was adapted for the current review as per guidelines (Margulis et al., 2014; Wells et al., 2013). However, its reliability has been questioned more recently (Luchini et al., 2017), in particular due to its low inter-rater reliability (Hartling et al., 2013; Lo et al., 2014). Despite this, our kappa value was high in this study. While the cross-sectional risk of bias tool used in this review has been employed in several studies (e.g., Busby et al., 2015; Herzog et al., 2013; Littlewood et al., 2017; Modesti et al., 2016), its psychometric properties have yet to be established. Furthermore, adjustment for depression was identified as a critical factor for which studies could be given

an additional star rating when assessing bias; however, other pertinent factors such as prior history of SSHTBs may have been equally important to control for, given their strong association with future behaviours (Hawton & van Heeringen, 2009). Regardless, several studies failed to control for either depression or self-harm history, and some did not account for potential confounding at all, so this decision likely had little impact on ratings. Finally, the tendency for newer studies to score lower on risk of bias may reflect the increasing trend of using such instruments in more recent times.

With regards to limitations stemming from the literature, the majority of studies were conducted in northern Europe and the United States. It is therefore unclear whether findings are generalisable to non-Western cultures, given that attitudes toward suicide may differ by country or culture (Schomerus et al., 2015). Several register-based studies stemmed from Scandinavia, where populations tend to be predominantly white, have a relatively high socioeconomic status, and access to free universal health care (Kuramoto et al., 2010). Publications also suffered from potential selection bias due to convenience sampling, such as recruiting from higher education settings, obituaries, or newspaper advertisements. While many publications (mostly register-based) scored low on risk of bias, others failed to present pertinent information including details about the methodology or analyses conducted, or even age distributions. This raises questions about the quality and representativeness of some data. Furthermore, while the inclusion criteria were aimed at capturing the experience of individuals between 12-18 years old, this also meant that some younger and older participants were included, given that most studies employed broad age criteria. Acknowledging that definitions of adolescence vary, and “young people” may be defined as individuals up to 24 years of age (Sawyer et al., 2018; World Health Organization, 2021), it was decided not to impose an upper age limit for the included studies, providing that they met the other criteria for inclusion. After consideration, publications which focused solely on the experience of

18+ year olds were also excluded, given that they tended to report an older average age and therefore would not truly reflect the experience of adolescent groups, even if they included some 18 year old participants. However, an alternative approach could have been to allow for inclusion of studies with 18+ year olds, where a large proportion (e.g., 50% or above) of participants were 18; due to limited details often provided in publications and study authors frequently not being contactable, this approach was not taken. However, there is the potential that some of these studies could have provided relevant data on a majority sample of 18 year olds, and thus is a limitation of this review. Overall, given the variability in inclusion criteria across individual studies, it is possible that those publications ultimately included do not necessarily capture the experience of all bereaved adolescents. There was also an absence of qualitative studies which met the inclusion criteria.

#### ***3.4.5 Summary of Findings and Next Steps***

Despite some contradictory evidence regarding the relative risk of SSHTBs, the studies included in this review reinforce the view that suicide bereaved adolescents are at risk of similar outcomes themselves. Furthermore, consequences are not restricted to familial bereavements, as the loss of a friend or non-familial individual may also be harmful. While much of the evidence in this area stems from data from national population registers, additional work aiming to understand how adolescents who do not present to clinical settings are affected by bereavement is required, as findings from self-report studies are inconclusive. Research shows that self-harm is prevalent but more hidden in the community (Geulayov et al., 2018), thus, studies of community adolescents, using validated measures and larger representative samples, are essential. Work based outside of Europe and the United States is also called for given the lack of research in these settings.

Although exposure to suicide was associated with increased risk of some SSHTB outcomes, it is worth noting that other bereavements also led to similar outcomes for young people. Future research and practice addressing suicide should therefore look beyond cause of death and consider the broader context of loss. For instance, research with young adults (18-40 years old) has highlighted stigma as a potential moderator of the relationship between bereavement and suicide attempts (Pitman et al., 2017; Pitman et al., 2016a, 2016b), and other variables such as family environment (Luecken, 2008), closeness of the relationship or quality of remaining social supports may be particularly influential (Andriessen et al., 2016). Indeed, theory-based research can help conceptualise this broader context of bereavement, as it is acknowledged that suicide results from an interplay of biopsychosocial factors. As mentioned in Chapter 2, increasing recognition has been given to the role of suicide bereavement in frameworks such as the IMV model, which views exposure to the self-harm of others as a key factor in the transition from ideation to attempts (O'Connor, 2011; O'Connor & Kirtley, 2018), and potentially a pre-motivational phase variable elevating background vulnerability to self-harm. Yet, research testing these assumptions with adolescent populations is scarce. As the findings of this review suggest, factors which predict ideation may differ from those which predict behavioural enactment, which supports the application of ideation-to-action frameworks in research moving forward.

Concentrating on the areas of ambiguity highlighted in this chapter, a number of questions for future research arise, some of which have already been touched upon in Chapter 2. Firstly, there is a need for more work investigating the relationship between experiences of suicide loss and SSHTBs among adolescents. Research using validated self-report measures, with adolescents in the community, and comprising representative samples, is especially lacking, as are qualitative and longitudinal investigations. There is also a paucity of research grounded in theory, for which ideation-to-action models of suicide may offer value. As the

findings of this review indicate that outcomes following bereavement depend on the specific outcome being measured (i.e., ideation vs attempts vs deaths), theoretical models which recognise the distinction between intention formation and behavioural enactment may be especially applicable. Finally, there is a lack of data from Scotland on the extent of suicide (or any) bereavement among adolescents; indeed, no studies included in this review were based on Scottish samples. This is important, as in order to understand the nature of bereavement and its association with self-harm and other life experiences, it is important to first understand the extent of the issue.

#### ***3.4.6 Research Questions to be Addressed by the Remaining Empirical Chapters***

The current thesis aims to answer the following five research questions:

1. How many young people from a Scottish secondary school sample are bereaved, either by suicide or other modes of death?
2. What is the relationship between bereavement and self-harm or suicidal ideation and enactment cross-sectionally?
3. Can experiences of bereavement be used to predict self-harm or suicidal ideation and enactment longitudinally?
4. What role do established psychosocial variables implicated in the IMV model and the wider bereavement literature, including social support, coping, and attitudes, play in the development of self-harm ideation or enactment?
5. What are the lived experiences of young people who have been bereaved by someone significant, and what factors help and hinder the process of dealing with a loss?

Guided by predictions from the IMV model as discussed in Chapters 1.5 and 2.6, this thesis will present findings from three empirical chapters which explored these research questions

through a mixed methods programme of investigation. The rationale behind the methodological approaches and choices regarding research design are detailed in the following methodology chapter.

### **3.5 Chapter Summary**

#### **Key points for this chapter:**

- A systematic review of the literature concerning suicide versus other losses demonstrates ample evidence that suicide bereavement is associated with excess suicide mortality among adolescents, though the evidence of hospital-treated or community self-harm is mixed, and there is a lack of evidence with regard to elevated risk of suicidal ideation.
- Factors other than specific cause of death, such as circumstances surrounding the death and personal relationships, are important to consider when evaluating the impact of a loss.
- Additional research is needed to understand the relationship between bereavement and self-harm among community samples of adolescents, and further work is needed utilising validated measurement tools, representative samples, research grounded in theory, and longitudinal and qualitative approaches.

#### **Questions for subsequent chapters:**

- What methodological approaches will be employed in this programme of research to investigate the relationship between bereavement and self-harm, and the qualitative experiences of bereavement among adolescents?
- What is the relationship between bereavement, and relevant established psychosocial variables, and self-harm outcomes among a community sample of adolescents?

- What do adolescents say about their lived experiences following a death of someone important to them?

**Next steps:**

- The systematic review reported in this chapter identifies the need for further work investigating the relationship between experiences of suicide loss and SSHTBs among adolescents. Five research questions have been presented to guide this programme of research. Chapter 4 will offer an overview of the empirical studies undertaken throughout this thesis, and provide a rationale for the methodological choices made to address the remaining research questions. These studies will then be presented in Chapters 5-7 which follow.

## Chapter 4 Methodology

This chapter provides an overview and rationale of the methodological approaches used for the empirical studies carried out as part of this thesis. The systematic review reported in Chapter 3 offered a critical appraisal of the wider literature, and highlighted the main gaps in knowledge relating to adolescent experiences of suicide bereavement. Findings from this review informed the remaining research questions of this thesis (see section 3.4.6), which will be addressed through a series of three empirical studies. This chapter justifies the rationale behind the methodologies for these three studies, which include: a quantitative cross-sectional analysis of an existing schools dataset (Study 1), a quantitative longitudinal schools study (Study 2), and an in-depth qualitative interview study which also included a quantitative questionnaire and card sorting task component (Study 3). This methodology chapter accounts for which investigative methods were chosen and why, as well as provide a justification of the analytical approaches taken. Details on how each study was executed are provided in the following chapters.

### 4.1 Rationale for Using a Mixed Methods Approach

Thus far, research within suicidology has been dominated by epidemiological studies, and more generally quantitative work. Hjelmeland and Knizek (2010) cited that less than 3% of studies published within the three core suicidology journals between 2005-2007 comprised of qualitative methods, and Goldblatt et al. (2012) reported that only a minority of published articles within these three journals (between 0 and 5.5% from 2006-2010) focussed on the experiences of people bereaved by suicide. Given that the area of adolescent suicide bereavement and self-harm/suicide is a relatively underexplored field with much yet to be understood, there is thus no 'best' method for approaching data collection. It is widely

acknowledged that research questions (rather than methods) should drive methodology, particularly within the field of suicide research (Hjelmeland, 2015). The questions for this thesis, posed at the end of Chapter 3, centre around improving our understanding of how adolescents bereaved by suicide or other causes experience such an event, and examining theory-driven factors relevant to the development of adverse outcomes (including self-harm). Specifically, the questions of interest include:

1. How many young people from a Scottish secondary school sample are bereaved, either by suicide or other modes of death?
2. What is the relationship between bereavement and self-harm or suicidal ideation and enactment cross-sectionally?
3. Can experiences of bereavement be used to predict self-harm or suicidal ideation and enactment longitudinally?
4. What role do established psychosocial variables implicated in the IMV model and the wider bereavement literature, including social support, coping, and attitudes, play in the development of self-harm ideation or enactment?
5. What are the lived experiences of young people who have been bereaved by someone significant, and what factors help and hinder the process of dealing with a loss?

Questions 1 to 4 concern the associations between bereavement, established psychosocial factors, and suicidal or self-harm outcomes. They ask about prevalence, and testing relationships or correlates between measurable factors, with predictions guided by theory. Quantitative methods are best suited to answering questions of this nature; they aim to see how data collected from participants fits an existing theory or conceptual framework, by testing specific variables deductively (Creswell & Plano Clark, 2011). Numerical statistical analyses can then enable conclusions about whether hypotheses can be supported or rejected,

allowing for an assessment of the validity of the existing theory. Qualitative methods are less appropriate for deductive hypothesis testing, particularly when investigating large samples and observing causal relationships between factors (Yardley & Bishop, 2011).

The final Research Question 5 concerns the lived experiences of adolescents. It aims to gain rich, detailed information about how adolescents who have lost someone significant to suicide or other causes deal with the death, without necessarily looking to generalise findings, but rather to explore their thoughts and experiences open-endedly, and build on findings from the quantitative chapters. Qualitative methodologies are appropriate for learning about participants' views and the meaning that they place on their experiences (Creswell & Plano Clark, 2011). There has been a general lack of qualitative enquiry within suicidology. Much of the research to date exploring suicide and self-harm tends to be quantitative, investigating measurable correlates of and risk factors for self-harm (Goldblatt et al., 2012; Hjelmeland, 2015; Hjelmeland & Knizek, 2010), without necessarily considering the wider contextual issues and how young people interpret their own experiences. Qualitative research can offer rich information consisting of detailed and complex accounts, in order to explore a deeper understanding and interpret meanings from participants' experiences (Braun & Clarke, 2013). This is particularly important where the literature base is dominated by descriptive risk factor studies, without understanding how, when, where, and for whom the risk factors may be salient (Hjelmeland, 2015). Qualitative enquiry was therefore the most suitable approach to elicit the stories and give voice to the experiences of young people surrounding a past bereavement to address the final research question. As such, a mixed methods approach was chosen to address the research questions.

*Mixed methods* research can be defined in many ways, with some suggesting it is the combination of quantitative and qualitative approaches within a single study (Creswell & Plano Clark, 2011), and others viewing it as the combination of approaches across a

programme of research (Johnson et al., 2007). It can apply to methods of design, data collection, and analytical techniques. The application of mixed methods can help provide a richer, more comprehensive understanding of a phenomenon, and increase the validity and confidence in findings by employing more than one approach to an investigation, particularly as each method has inherent biases and limitations when used on its own (Creswell & Plano Clark, 2011). Using the definition reached by Johnson et al. (2007) following an analysis of definitions from leading researchers in the area, this thesis uses a mixed methods approach by combining components of quantitative and qualitative enquiry across a set of closely related studies. This will enable a richer, broader understanding and corroboration of findings within the area.

Different methods of research (i.e., quantitative and qualitative) stem from divergent philosophical paradigms. These paradigms make assumptions about the nature of reality (ontology), how we gain knowledge (epistemology), and the role of values and morals within research (axiology; Creswell & Plano Clark, 2011; Kaushik & Walsh, 2019). Quantitative research generally derives from scientific or post-positivist approaches, which are shaped from the top down and use theory to formulate and test hypotheses to ultimately add to the evidence base supporting or refuting a theory. Qualitative research, on the other hand, derives from interpretive or constructivist perspectives, working from the bottom up to build an in-depth knowledge of people's views and subjective meanings, often to generate patterns and build theory (Creswell & Plano Clark, 2011; Kaushik & Walsh, 2019; Yardley & Bishop, 2011). Given that these approaches may be seen as incompatible, pragmatism has been proposed as a useful paradigm to approach mixed methods research.

Pragmatism is based on the idea that methodological approaches should be shaped by what works best to answer the research question(s) at hand, rather than focusing on methods or philosophical worldviews (Kaushik & Walsh, 2019). It does not require choosing between

post-positivism and constructivism (Creswell & Plano Clark, 2011; Kaushik & Walsh, 2019). Rather, it acknowledges that moving back and forth between deduction and induction can be helpful for solving practical, socially-situated, real life problems (Kaushik & Walsh, 2019). There have been calls for using mixed methods designs within suicidology, given that the majority of research within the field has been quantitative (Kral et al., 2011; Rogers & Apel, 2010). Mixed methods research offers the benefit of combining the strengths of each individual approach, thus taking a wider focus and integrating objective and subjective points of view, enhancing the validity of findings, and ultimately enabling a more nuanced understanding of suicide and suicidal behaviour. The methods chosen within this thesis consisted of a combination of quantitative (questionnaire-based and card-sorting task) and qualitative (interview) components to answer multiple research questions concerning a complex topic of study. Social constructionism was employed as a theoretical perspective to guide analysis in the qualitative interviews study, and further elaboration of this is given in Section 4.4.1.1 below.

## **4.2 Study Designs**

To address the research aims and questions posed in Chapters 2 and 3, this thesis involved three empirical studies which employed various designs. Although each empirical chapter will provide detailed information on the recruitment strategies and procedures for each study, a summary of the target population and context, as well as an overview of the procedures and overarching ethical considerations is provided in this chapter to explain the rationale behind the selected study designs. The research was designed so that each study built upon the learning from the prior one, such that the findings from Study 1 helped to inform the design of Study 2, and similarly, learning from Study 2 informed the development

of Study 3. Data collection was thus carried out in this order to ensure that any learning could be applied to the subsequent research.

#### ***4.2.1 Rationale for Target Age Range and Setting***

As noted in Chapter 1, suicide is a leading cause of death among 15-29 year olds across the world (World Health Organization, 2019), and available data specifically from Scotland shows that suicide rates are high amongst 15-24 year olds (Scottish Public Health Observatory, 2021). Given that self-harm is a key predictor of eventual completed suicide (Hawton, Saunders, et al., 2012), and studies show that self-harm is prevalent among Scottish youth (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009; Quigley et al., 2017b; Russell et al., 2018), urgent research is needed which focuses specifically on the Scottish context. For this reason, this PhD focussed on the experiences of adolescents within Scotland.

As also described in Chapter 1.3, varying definitions of *adolescence* exist (Hawton, Saunders, et al., 2012; United Nations, 2020; World Health Organization, 2020), referencing chronological age, biological changes, social transitions, and cognitive development. Self-harm becomes increasingly common from the age of 12 (Hawton, Saunders, et al., 2012), and studies show this is linked to pubertal development (Patton et al., 2007). The majority of research within the field of suicide and self-harm looking at the experiences of adolescents tends to concern the 12-18 year age range (e.g., Bilsen, 2018; Nock et al., 2013). For this reason, in order to investigate this period of increased vulnerability for self-harm while also facilitating comparisons with the extant literature, this thesis focuses on the experiences of the 12-18 year age bracket.

#### ***4.2.2 Rationale for Sources of Recruitment***

To address the research questions posed for this thesis, participants were sought from several sources. Study 1 involved analysis of secondary data collected from schools in Glasgow and Stirling, and aimed to tackle Research Questions 1-2. This particular dataset was selected as it comprised a large sample of community-based adolescents in Scotland, broadly representative of the population in terms of school size and type, ethnicity, educational attainment, and socioeconomic deprivation (O'Connor, Rasmussen, Miles, et al., 2009). The data were collected from 2006-2007 as part of the Lifestyle and Coping Survey, which gathered information from pupils in Scotland and Northern Ireland; only Scottish data are examined here, in keeping with the focus of this PhD on the Scottish context. This sample would allow for estimations of the prevalence of bereavement among adolescents generally (addressing Research Question 1), as well as testing cross-sectional associations between bereavement and SSHTBs (Research Question 2) with an adequately powered sample size. Participants were mostly between 15-16 years old (range = 14-18 years,  $M = 15.4$ ,  $SD = 0.8$ ), meeting the age criteria for this thesis.

In order to build on these findings and further address Research Questions 1-4, Study 2, which involved a longitudinal component, similarly sought to recruit adolescents from secondary schools throughout the country. This would again allow for capturing the views of a large sample of community-based bereaved and non-bereaved adolescents. The criteria for participation covered all secondary-school year groups, so that most participants were expected to be between 12-18 years old. Due to issues around recruitment (see Chapter 6), the achieved sample was smaller and ultimately younger than that of Study 1 (baseline data: range = 11-17 years,  $M = 13.2$ ,  $SD = 1.5$ ), and results are interpreted with this in mind.

Finally, Study 3 endeavoured to build on the findings from schools and address Research Question 5, and thus employed the same eligibility criteria with regards to age;

individuals from 12 to 18 years were eligible to take part. However, because this study aimed to specifically recruit a sample of bereaved individuals in order to gather in-depth qualitative data on bereavement experiences, a smaller targeted sample was sought. Recruitment was thus broadened to not only involve schools (where recruitment had already proved challenging), but also advertisements in public spaces, universities, youth clubs or organisations, self-harm or bereavement support organisations, and social media or online forums. This was intended to increase the likelihood of finding participants who met inclusion criteria, and within a more feasible timeframe. None of the participants ultimately were recruited via schools, and so data collection took place at alternative locations (e.g., meeting rooms or public venues) rather than within school settings. In the end, the achieved sample in this final study consisted of individuals aged 16-18 ( $M = 17.7$ ,  $SD = 0.6$ ), and findings are considered in light of the age differences (see Chapter 7).

A summary of the three empirical studies which constitute this thesis is provided in Table 4.1. An overview and justification for the design of the different studies, including a description of the methods and analytical approaches employed, is provided below. Specific details about the application of measures (e.g., achieved values of internal consistency), analytic techniques (e.g., statistical decisions based on the actual data collected rather than planned analyses) and ethical issues raised during the course of the studies will be explained in each individual study chapter.

**Table 4.1***Overview of Empirical Studies*

<b>Study</b>	<b>Description</b>	<b>Analytical Approach</b>
Study 1 (Chapter 5): Quantitative cross-sectional analysis of an existing schools dataset	Secondary analysis of cross-sectional data from 2,008 Scottish adolescents, measuring life events and SSHTB outcomes. Examines (1) the prevalence of bereavement of an immediate family member or someone else close, (2) the prevalence of SSHTBs, and (3) associations between bereavement and SSHTBs.  Data collected from 2006-2007.	Descriptive statistics, t-tests, ANOVA, chi-square, and hierarchical multinomial logistic regressions
Study 2 (Chapter 6): Quantitative longitudinal schools study	Longitudinal study with data from 185 Scottish adolescents at two time points (6 months apart), expanding on findings from Study 1. Examines (1) the prevalence of bereavement, (2) the prevalence of SSHTBs, and (3) cross-sectional and longitudinal associations between IMV model variables and SSHTBs.  Data collected from 2017-2018.	Descriptive statistics, t-tests, ANOVA, chi-square, hierarchical multinomial logistic regressions, and hierarchical multiple regressions
Study 3 (Chapter 7): Mixed methods interview study	Mixed methods study which includes (A) Semi-structured interviews exploring the experiences of young people bereaved by suicide or other deaths, guided by findings from Study 2, (B) Quantitative self-harm questionnaire, and (C) Card-sorting task relating to prior experiences of SSHTBs.  Data collected from 2019-2020.	Thematic analysis for interview data (A), descriptive statistics for quantitative questionnaire (B), and commentary on wider qualitative themes for card sorting task (C).

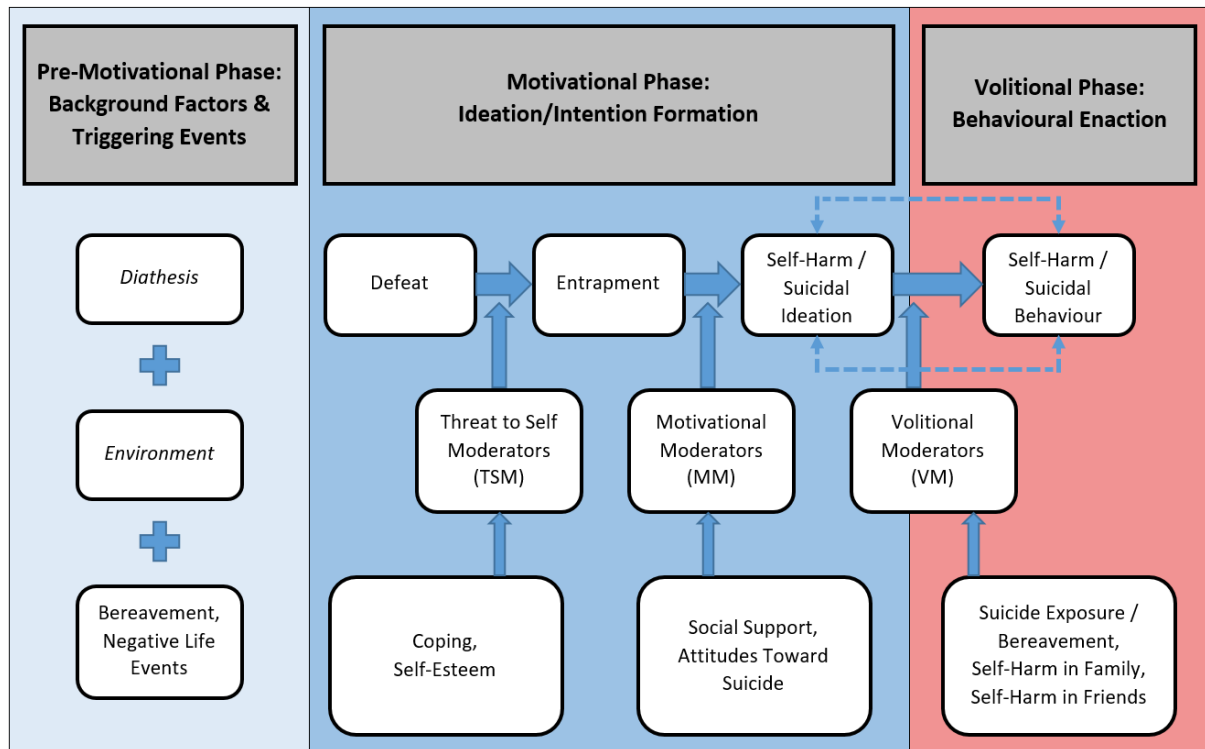
**4.3 Quantitative Studies**

As mentioned in the introductory Chapters (1 and 2), the IMV model (O'Connor, 2011; O'Connor & Kirtley, 2018), which informs this thesis, is a tripartite model which seeks to explain the emergence of suicidal (or self-harm) thinking and behaviours. The three parts

of the model detail variables involved in this process: background vulnerability factors form the context in which suicidal thinking may emerge (pre-motivational phase), and factors which lead to the development of suicidal ideation (motivational phase), and the transition from thoughts to engaging in self-harm or suicide attempts (volitional phase) are also accounted for. As covered in Chapters 1 and 2 (Sections 1.6 and 2.5), two hypotheses emerge from the model relevant to this thesis: bereavement experiences may present as background factors which predispose an individual to suicidality, while experiences of suicide loss may also represent Volitional Moderators involved in the transition from ideation to behaviours. A summary of the key constructs from the model which are explored within the quantitative studies of this thesis (Studies 1 and 2) is depicted in Figure 4.1. Table 4.2 provides a list of tools used to measure these constructs. Further details about the choice of methodologies for each chapter are provided in sections 4.4.1 and 4.4.2 below.

**Figure 4.1**

*Constructs Investigated Within this Thesis and Their Suggested Placement Within the IMV Model (Figure Adapted Based on O'Connor & Kirtley, 2018)*



**Table 4.2**

*Summary of IMV Model Constructs Investigated and Measures Used Within Studies 1 and 2*

<b>Model Phase</b>	<b>Constructs</b>	<b>Measure Used in Study 1</b>	<b>Measure Used in Study 2</b>
Demographic Variables and Potential Confounders	Age	Demographic question	Demographic question
	Gender	Demographic question	Demographic question
	Ethnicity	-	Demographic question
	Socio-economic status	-	Proportion of pupils in school entitled to free school meals (Scottish Government, 2018a)
	Anxiety	Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)	Generalised Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006)
	Depression	Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)	Short Mood and Feelings Questionnaire (SMFQ; Angold et al., 1995)
Pre-Motivational Phase	Bereavement status	Three items from the Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)	Questions created for the study Three items from the Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)

	Negative life events	-	Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study (Hawton et al., 2006)
Motivational Phase	Defeat	-	Defeat Scale (Gilbert & Allan, 1998)
	Entrapment	-	Entrapment Scale (Gilbert & Allan, 1998)
	Self-harm/suicidal ideation	Item from the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)	Two items from the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock et al., 2007)
	Coping	-	Brief COPE (Carver, 1997)
	Self-esteem	-	Rosenberg Self-Esteem Scale (Rosenberg, 1965)
	Social support	-	Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988)
	Stigma of suicide	-	Stigma of Suicide Scale-Short Form (SOSS; Batterham et al., 2013b)
	Prolonged grief	-	Inventory of Prolonged Grief-Children (IPG-C; Spuij et al., 2012)
Volitional Phase	Suicide bereavement	Item from the Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)	Item from the Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)

Self-harm of  
family/friends

-

Two items from the Life Events Checklist of the Child & Adolescent Self-Harm in Europe (CASE) Study (Hawton et al., 2006)

Self-harm/suicidal  
behaviours

Item from the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)

Five items from the Child & Adolescent Self-Harm in Europe (CASE) Study Lifestyle and Coping Questionnaire (Hawton et al., 2006)

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### ***4.3.1 Study 1: Quantitative Cross-Sectional Analysis of an Existing Schools***

#### ***Dataset***

A quantitative analysis of cross-sectional data from an existing schools-based investigation was conducted to address the gap in research relating to theory-based work on bereavement and self-harm outcomes (namely, Research Questions 1 and 2). The dataset included information on the experience of familial bereavement, non-familial bereavement, and family or friend suicide, in addition to self-harm outcomes. Other findings from this study have been reported elsewhere (e.g., data from Scotland reported in O'Connor, Rasmussen, et al., 2009a, 2009b; O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009), though the relationship between bereavement experiences and self-harm outcomes has yet to be explored in detail.

Secondary data represent a valuable resource, enabling the replication and confirmation of results, the building on previous research, and maximising the benefits of large datasets (Pienta et al., 2011). It also provides a cost- and time-effective opportunity to test new hypotheses and theories without needing to collect the data first hand (Cheng & Phillips, 2014; Johnston, 2014), nor add to the burden of research participants (Ruggiano & Perry, 2019). In this case, the cross-sectional data provided an opportunity to test preliminarily the proposed pathways within the IMV model, and inform hypotheses to be tested longitudinally in the subsequent study (Study 2). Analyses were limited by the lack of choice over measures used, as is often the case with secondary data (Cheng & Phillips, 2014; Pienta et al., 2011). Nevertheless, the range of measures used within the study presented an important opportunity to maximise the benefits of this dataset and explore relationships between bereavement and self-harm outcomes with a large sample of adolescents.

#### **4.3.1.1 Rationale for Choice of Constructs and Measures.**

The measures used in this study were chosen by the researchers who collected the initial data. While there was no control over the choice of these measures, they have nevertheless been deemed appropriate for use with adolescent age groups, as defined in this thesis (Chapter 1.3 and Section 4.2.1 above). The study involved use of a modified paper version of the Child and Adolescent Self-Harm in Europe (CASE) Study Questionnaire (Madge et al., 2008; O'Connor, Rasmussen, Miles, et al., 2009), which was developed through extensive collaboration between international experts in self-harm and schools research, and piloted with adolescents both in schools and psychiatric settings (Hawton et al., 2006). The original questionnaire has been used across several studies with young people in this age group (e.g., Hasking et al., 2013; Madge et al., 2011; Scoliers et al., 2009). Only the variables selected for analysis in the current study are discussed in the following sections, according to their placement within the IMV model (see Figure 4.1). It is worth noting that those variables selected for inclusion here derive from the original CASE Study Questionnaire, and were not modified. Details of achieved psychometric properties (namely Cronbach's alphas) are provided in Chapter 5.

##### ***4.3.1.1.1 Demographic Variables and Potential Confounders.***

*Demographic characteristics.* Given the age and gender differences that exist in self-harm, and consistent with the wider literature (Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012), age and gender were selected as control variables. Age and gender data were measured using tick-box style answers.

*Mood.* Depression and anxiety were also measured to control for possible confounding, in line with previous research (Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012) and given established associations

with self-harm (Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009) and bereavement (Berg et al., 2016; Bolton et al., 2016; Kaplow et al., 2010), The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used to measure symptoms and severity of anxiety and depression. This 14-item self-report scale comprises seven items for anxiety and seven for depression. Participants are asked to rate their agreement with statements about their feelings over the preceding week, using a four-point Likert-type scale ranging from 0 (e.g., not at all) to 3 (e.g., definitely), e.g., “*I look forward with enjoyment to things*”, and “*I can sit at ease and feel relaxed*”. Higher total scores indicate more severe symptoms, with cut-offs of 7 and 9 suggested to indicate possible cases of depression and anxiety in adolescents, respectively (White et al., 1999). The HADS has been validated for use with adolescents (Chan et al., 2010; White et al., 1999).

#### ***4.3.1.1.2 Outcome Variable: Self-Harm and Suicidal Ideation or Behaviours.***

*Self-harm.* Self-harm behaviours were measured using the item from the CASE Study questionnaire (Hawton et al., 2006), “*Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*” Participants responding ‘Yes, once’ or ‘Yes, more than once’ comprised the “Enactment” group.

*Self-harm ideation.* Participants were asked, “*Have you, during the past month or the past year, seriously thought about taking an overdose or trying to harm yourself but not actually done so?*” Those responding ‘Yes, the last time was in the past month’ or ‘Yes, the last time was over a month ago, but less than a year ago’, and ‘No’ to the question on self-harm behaviours, comprised the “Ideation” group. Individuals who responded “No” to both questions were considered “Controls” with no history of SSHTBs.

#### ***4.3.1.1.3 Pre-Motivational & Volitional Phase Variables.***

*Bereavement.* Exposure to bereavement may constitute a negative life event that increases the risk of suicidal ideation, thus setting the broader context for suicide within the pre-motivational phase of the IMV model (O'Connor, 2011; O'Connor & Kirtley, 2018). At the same time, converging evidence suggests that exposure to the suicidal or self-harming behaviours of others is a key volitional factor that governs the transition from ideation to attempts (O'Connor & Kirtley, 2018).

To test these hypotheses, bereavement experiences were ascertained using three items from the Life Events Checklist (LEC) of the CASE Study (Hawton et al., 2006). Three questions from the 20-item checklist concern experiences with death: “*Has anyone among your immediate family (mother, father, brother, or sister) died?*”, “*Has anyone close to you died?*”, and “*Has anyone among your family or friends committed suicide?*” It is worth noting that this survey was based on the original CASE Study questionnaire, which was developed before widespread awareness that the term *commit* is no longer advised. Respondents were asked to state whether they had experienced these events, and if so, whether it occurred in the past 12 months or more than a year ago. Using these three items, a composite variable was created to reflect whether participants had ever experienced any bereavement, which was used to test the pre-motivational phase of the model. A further breakdown of this variable distinguished whether bereavements were by suicide or non-suicide, in order to test the volitional phase of the IMV model. If a participant responded ‘Yes’ to a suicide of family or friends, they were considered to be suicide-bereaved; if they responded ‘Yes’ to either the death of an immediate family member or anyone close, but ‘No’ to a suicide death, they were considered non-suicide bereaved.

#### **4.3.1.2 Rationale for Analytical Approach**

As the data for this study were collected from adolescents in the general population, and clinical and self-harm data are often highly skewed given their prevalence (Gonzalez-Blanks et al., 2020), a certain level of skewness is expected in the data. When data have a non-normal distribution, one solution is to transform the data, or alternatively employ statistical techniques which do not assume normality of distribution (Field, 2018). Therefore, in Study 1, given that the outcome variable (self-harm group) was measured on a nominal scale, logistic regression was chosen as the main analytical approach to test the proposed pathways informed by the IMV model. Two separate hierarchical multinomial logistic regressions were conducted for Study 1, representing tests of the pre-motivational and volitional phases of the model. Predictor variables comprised of bereavement status in the pre-motivational phase test of the model, and cause of bereavement (suicide or non-suicide) in the volitional phase test. The outcome measure (self-harm group) was divided into one of three possible options: enactment, ideation with no actions, or controls with no history of self-harm ideation or actions. As mentioned above, all statistical analyses controlled for age, gender and mood, given their associations with self-harm and bereavement, and for consistency with the wider literature (Berg et al., 2016; Bolton et al., 2016; Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009; Kaplow et al., 2010; O'Connor et al., 2012). Chapter 5 provides further details on how this study was conducted, the specific analytic steps taken to conduct the above analysis, and also presents the research findings which informed the design of Study 2.

#### **4.3.2 Study 2: *Quantitative longitudinal schools study***

Study 1 provided important insights into the relationship between bereavement and self-harm outcomes among adolescents, and suggested that suicide loss is associated with

self-harm outcomes cross-sectionally (see Chapter 5). However, the data also lacked detailed knowledge on circumstances surrounding the deaths, as well as additional evidence on other theoretically-grounded factors which might be relevant to the experience of self-harm. Furthermore, cross-sectional studies, while useful to determine prevalence of an outcome or condition at a given point in time, are limited in their ability to provide findings from which we can make causal inferences. Longitudinal designs are valuable for investigating changes in variables over time and making predictions on future behaviours (Ribeiro et al., 2016), thus, highlighting potential targets for intervention before adverse outcomes arise. As such, a prospective longitudinal study was conducted to investigate whether bereavement experiences and related social and psychological factors would be temporally associated with SSHTBs within the context of the IMV model, further addressing Research Questions 1-4.

#### **4.3.2.1 Rationale for a 6-month follow-up.**

Longitudinal studies with adolescents have sought to predict subsequent engagement in suicidal or self-harming behaviours using periods of follow-up ranging from 6 months (e.g., O'Connor, Rasmussen, et al., 2009a, 2009b; Rasmussen et al., 2016; You et al., 2012), one year (e.g., Hasking et al., 2013; Hasking et al., 2015; Larsson & Sund, 2008; Lundh et al., 2011; Tatnell et al., 2014; You et al., 2015) or longer (e.g., Guerry & Prinstein, 2010; Hankin & Abela, 2011; Marshall et al., 2013; Moran et al., 2012; Rossow & Norstrom, 2014; Wichstrom, 2009). For instance, the longest follow-up period in the cited studies was 15 years and 5 months (Moran et al., 2012).

Plener et al. (2015) systematically reviewed longitudinal research on non-suicidal self-injury and self-harm, with 25 of the 32 included studies reporting on participants who were adolescents at baseline. The authors found that on average, follow-up duration was 19.5 months ( $SD = 18.8$ ) in studies of non-suicidal self-injury, and 67.4 months ( $SD = 66.7$ ) in

studies of self-harm. Among the included research using community samples of adolescents, follow-up periods ranged from 6 months to 174 months.

Research also suggests that by 6 to 12 months, most adolescents who are bereaved will be accommodating the death and resuming normal cognitive function and emotional development following the loss, while complications following a suicide death will often present within the first 6 to 12 months post-loss (Robin & Omar, 2014). Prolonged Grief Disorder as per ICD-11 diagnostic criteria requires symptoms (e.g., longing for and preoccupation with the deceased and intense emotional pain) to have persisted for a minimum of six months, causing significant functional impairment (World Health Organization, 2018). Kuramoto et al. (2013) suggests there is a critical window for monitoring suicide risk among adolescents who have been bereaved by suicide, falling within the first two years after parental death. Furthermore, recommendations in the literature have been made for a minimum of a six-month period to have passed after a death for participants to be approached for study inclusion (Butler et al., 2017; Dyregrov et al., 2011). Accordingly, a six-month period was deemed an appropriate length of follow-up in the current prospective study, both in order to measure self-harm and bereavement outcomes, as well as minimise the potential for harm among recently bereaved adolescents (ethical considerations are discussed further in Section 4.5).

#### **4.3.2.2 Rationale for choice of constructs and measures.**

Measures were selected to capture experiences of participants across phases of the IMV model (see Figure 4.1), which were then compiled to form a questionnaire battery which was administered in paper format (Appendix A). A rationale for selecting these constructs is provided below under each section denoting IMV model phases, and a description is provided of the associated measurement tool. Several self-report tools were considered for each

construct under investigation, with a review of numerous measures undertaken at the start to assess the potential options. This review examined details such as: the scope of each measure, access and administration, cost, and psychometric properties. Measures commonly employed within self-harm and bereavement research, as well as additional tools found through searches of the wider literature, were evaluated. Those ultimately chosen here were selected on the basis of being brief (i.e., could be completed during one class period), accessible (either easily obtainable online or directly from the authors), free, and deemed appropriate for use with adolescent age groups. Tools with established reliability and validity metrics were chosen wherever possible, though in cases where this was not available (e.g., items concerning bereavement experiences), author-created items were developed based on previous published literature in the area (and thus are unvalidated measures). Details of achieved psychometric properties (namely Cronbach's alpha) are provided in Chapter 6.

#### ***4.3.2.2.1 Demographic Variables and Potential Confounders.***

*Demographic characteristics.* Due to age and gender differences in self-harm, and consistent with the wider literature (Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012), age and gender data were collected to control for these variables. Both were ascertained with check-box style responses, with category options for gender including: *male, female, other, and prefer not to say.*

The ethnicity and socioeconomic status (SES) of participants was also gathered to describe the sample and determine its representativeness. Ethnicity data was ascertained via check-box style responses. SES was determined by the percentage of pupils in the school entitled to free school meals, as reported by official Scottish Government data (2018a), which has been used as a measurement of SES in previous schools-based research (O'Connor, Rasmussen, Miles, et al., 2009; Russell et al., 2017). This rate was requested and obtained

directly from each school; however, proportions were reported at different times of the school year and with varying degrees of specificity, so government statistics were used instead for consistency.

*Depression.* Mood (depression and anxiety) was also measured to control for possible confounding, in line with previous studies (e.g., Dhingra et al., 2015; Hasking et al., 2013; O'Connor et al., 2012), and given the established associations between mood and self-harm (Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009) as well as bereavement (Berg et al., 2016; Bolton et al., 2016; Kaplow et al., 2010). Depression symptoms were assessed using the Short Mood and Feelings Questionnaire (SMFQ; Angold et al., 1995). Responses are given to 13 items describing how much the individual has felt or acted about events over the past two weeks, on a 3-point scale ranging from 0 (Not True) to 2 (True), e.g., “*I found it hard to think properly or concentrate*”. The SMFQ has been developed for and widely used with children and adolescents (e.g., Angold et al., 1995; Brent et al., 2009; Hamdan et al., 2013; Melhem et al., 2008; Muñiz-Cohen et al., 2010), and deemed to be a valid and reliable measure (e.g.,  $\alpha = .85$  in Angold et al., 1995).

*Anxiety.* The Generalised Anxiety Disorder (GAD-7; Spitzer et al., 2006) scale is a short self-report measure of symptoms of anxiety, and can be used as a screening tool for generalised anxiety disorder. It consists of 7 items tapping into common anxiety symptoms. Responses are given on a 4-point scale from 0 (Not at all) to 3 (Nearly every day), where participants indicate how bothered they have been by problems over the last two weeks, e.g., “*Worrying too much about different things*”. Previous studies show it to have good psychometric properties (e.g.,  $\alpha = .92$ ; Spitzer et al., 2006).

**4.3.2.2 Outcome Variable: Self-Harm and Suicidal Ideation or Behaviours.**

*Self-harm.* Self-harm was measured using five items from the CASE study questionnaire (Hawton et al., 2006). Participants were asked, “*Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*” Those responding ‘Yes, once’ or ‘Yes, more than once’ comprised the “Enactment” group. This group of participants were further asked about the timing of their first episode of self-harm, the most recent episode, method of self-harm on the last occasion, and possible motives for self-harm (all questions from the CASE Study questionnaire). An additional question created for this study was added to find out about the timing of self-harm in relation to any bereavements (whether they first self-harmed before or after a bereavement, or N/A if they were non-bereaved).

*Self-harm ideation.* Non-suicidal self-injury (NSSI) thoughts were assessed using the item from the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock et al., 2007), “*Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)*”. Suicidal thoughts were assessed with the SITBI item, “*Have you ever had thoughts of killing yourself?*” Both of these items were followed up with a question created for this study asking about the timing of the thoughts in relation to a bereavement (before, after, or N/A as not bereaved). A participant who answered ‘Yes’ to either NSSI or suicidal thoughts, and ‘No’ to the self-harm behaviours question, was considered to be in the self-harm “Ideation” group used for all further analyses. Therefore, this group consisted of all individuals with previous thoughts of self-harm or suicide, irrespective of their intent or motivation (similar to the enactment group with regards to the intent or motivation of their behaviours). Individuals responding “No” to the self-harm

question and to both of the ideation questions were thus considered “Controls” with no history of self-harm thoughts or acts.

Whether a participant had engaged in first-time or repeat self-harm or self-harm ideation over the study period could be ascertained by changes in their responses to these questions across the two time-points. Although self-harm group was the outcome measure in the main analyses (baseline self-harm group for cross-sectional analyses, and follow-up self-harm group for prospective analyses), self-harm ideation at baseline was also inputted as a predictor variable within the motivational phase test in the prospective analyses, given research suggesting it is a strong predictor of future self-harm (O'Connor, 2011; O'Connor & Kirtley, 2018; Ribeiro et al., 2016).

#### ***4.3.2.2.3 Pre-Motivational Phase Variables.***

*Bereavement.* Exposure to any bereavement may constitute a negative life event within the pre-motivational phase which increases the risk of an individual developing thoughts of self-harm or suicide. Indeed, the literature demonstrates an increased risk of SSHTBs among those experiencing several negative life events, including early experiences of abuse, family discord, or bullying, for instance (see Hawton, Saunders, et al., 2012 for a review). Such early life adversity, when combined with background vulnerability factors, sets the scene for developing thoughts of suicide or self-harm (O'Connor, 2011; O'Connor & Kirtley, 2018).

In this study, bereavement experiences were ascertained in two ways. Questions created for this study (and thus yet validated) were developed based on existing literature in this area (e.g., Andriessen et al., 2016; Feigelman et al., 2009; Pitman et al., 2016a).

Participants were asked, “*Have you experienced the death of someone important to you during your lifetime, such as a friend or family member?*” Those who responded

affirmatively were presented with further questions on the person's relationship to them (20 check-boxes were provided as well as a space to write their own descriptions), and cause of death (options included natural expected death, natural unexpected/sudden death, accident, suicide, murder/homicide, don't know, or other), with examples provided next to each mode of death given for clarity. Participants were asked to rate the perceived closeness of their relationship on a 5-point scale from 1 (not close at all) to 5 (very close), the quality of the relationship (on a 5-point scale from Extremely Positive to Extremely Negative), and how surprised they were about the death (on a 5-point scale from Extremely Surprised to Not at All Surprised). Free text response options were provided to ask about the length of time since the person died, the age of the deceased as well as their own age at the time of the death, and the length of time they knew the person. Whether the person was living with them before they died and whether they attended the funeral were also queried with a yes/no response. Participants were asked to complete these questions thinking about one individual whose death they felt affected them the most, in the case of multiple bereavements.

Furthermore, as in Study 1, lifetime bereavement experiences were also measured using three items from the Life Events Checklist (LEC) of the CASE Study (Hawton et al., 2006). The full 20-item checklist asks about 20 potentially traumatic events that may have occurred in young people's lives; possible responses include "*Yes, in the past 12 months*", "*Yes, more than a year ago*", or "*No*". This measure has been used in various studies of adolescents across different countries (e.g., Hasking et al., 2013; Madge et al., 2011). It includes items on: difficulties with schoolwork, interpersonal conflict, bullying, problems with or between parents, serious illness or accident of self/family/friends, physical or sexual abuse, troubles with police, sexual orientation worries, suicidal or self-harming behaviours in friends or family members, and death of someone close. In order to separate bereavement experiences from other adverse life events, the three items enquiring about experiences with

the death of someone close were used, as in Study 1; e.g., “*Has anyone among your immediate family (mother, father, brother, or sister) died?*”, “*Has anyone close to you died?*”, and “*Has anyone among your family or friends committed suicide?*”. Although the outdated language used in this last question was acknowledged, wording of items was left as in the original measure to allow for comparisons with the extant literature and Study 1. A follow-up question was added to the suicide item to identify who it was that died by suicide, with a blank space provided for a free text response (see Appendix A). A new variable was then created to reflect whether the participant was bereaved/non-bereaved, and further to differentiate between experiences of bereavement by suicide and bereavement by non-suicide deaths (used in analyses of the volitional phase of the IMV model).

*Life events.* Additional life events were measured using the remaining 17 items from the LEC (Hawton et al., 2006) unrelated to bereavement experiences, which were summed to create a total life events variable. Higher scores indicated a greater number of negative life events experienced by the young person (as per Madge et al., 2011). Hasking et al. (2015) reported a Cronbach’s  $\alpha$  of .75 for the full scale.

#### ***4.3.2.2.4 Motivational Phase Variables.***

*Defeat.* No known previous research has measured defeat and entrapment in relation to suicide bereavement. However, Andriessen, Mowll, et al. (2018) suggested that perceptions of guilt and persistent questioning of why the person died, common among those suicide bereaved, may increase rumination, which in turn increases suicidal thinking. Furthermore, the suicide of a loved one can be perceived as a permanent, ongoing and traumatic life change with no possibility of escape, which could presumably give rise to feelings of entrapment.

Thus, the Defeat Scale (Gilbert & Allan, 1998) was selected and used to measure perceptions of defeat. This self-report measure consists of 16 questions regarding perceptions of failed struggle and loss of rank or status during the last seven days. Responses are given on 5-point scales, ranging from 0 (Never) to 4 (Always), e.g., “*I feel powerless*”. A total score is calculated by adding each of the 16 items; higher scores indicate increased frequency of defeat-related cognitions.

*Entrapment.* The Entrapment Scale (Gilbert & Allan, 1998) assessed feelings of entrapment. It includes 16 self-report items regarding perceptions of feeling trapped in one’s current situation or circumstances, and motivation to escape. Responses to 16 items are given on 5-point scales, ranging from 0 (Never) to 4 (Always), e.g., “*I feel trapped inside myself*”. Scores are summed, and higher scores indicate increased frequency of entrapment related cognitions.

*Coping.* Previous research has found that coping ability is linked with suicidality, even after controlling for depression, and may interact with defeat and entrapment to increase or decrease risk of suicide (Gooding et al., 2015). Bartik et al. (2013b) found that suicide bereaved young people showed reduced coping skills, particularly in terms of their ability to find solutions to difficult situations, and were more likely to use avoidant coping and distraction rather than more helpful strategies such as social engagement. Suicide bereaved youth may also engage in increased risk-taking behaviours to cope with the loss, including misuse of alcohol and drugs and risky sexual behaviours (Bartik et al., 2013a), which may contribute to increased risk of SSHTBs.

In this study, coping was assessed using the Brief COPE (Carver, 1997), measuring the degree to which a person uses a specific strategy to deal with stressful situations. The scale has been used several times with adolescent populations (e.g., Blomgren et al., 2016; Horowitz et al., 2011; O’Brien et al., 2007), and consists of 28 items which describe various

methods of coping. Responses are given on a 4-point scale, ranging from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot), e.g., "*I've been looking for something good in what is happening*". Several methods of scoring have been proposed. Consistent with Blomgren et al. (2016) and Moore et al. (2011), the current study differentiated between adaptive coping (consisting of 16 items from subscales: active coping, planning, positive reframing, humour, acceptance, religion, use of emotional support, and use of instrumental support) and maladaptive coping (12 items from subscales: self-distraction, denial, substance use, behavioural disengagement, venting, and self-blame). These subscales were used in all analyses rather than an overall score.

*Self-Esteem.* Low self-esteem may increase risk of entrapment and suicidal ideation. Gooding et al. (2015) found that, after controlling for depression, low levels of self-esteem were associated with high scores on suicide probability (consisting of hopelessness, suicidal ideation, hostility, and negative self-evaluations). Seguin et al. (2004) showed that adolescents who attempted suicide and who experienced suicidal ideation differed from controls with no history of self-harm, but not each other, on levels of self-esteem. A meta-analysis by Soto-Sanz et al. (2019) showed that low self-esteem was a risk factor for suicide attempts in adolescents and young adults aged 12-26. Self-esteem was also predictive of subsequent depression among youth bereaved by parental death (Brent et al., 2009), suggesting it may buffer the impact of a bereavement on young people.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure self-esteem, and consists of 10 statements gauging overall self-worth and positive and negative feelings towards oneself. Responses to statements (e.g., "*On the whole, I am satisfied with myself*") are given on a 4-point scale ranging from 0 (Strongly Agree) to 3 (Strongly Disagree), with a total possible score from 0 to 30. Higher scores indicate greater self-esteem. This scale has been widely used with young people and shown to have good psychometric

properties, with Cronbach's  $\alpha$  ranging from .85 to .89 with adolescent samples (Brausch & Gutierrez, 2010; Dori & Overholser, 1999; Grøholt et al., 2005).

*Social Support.* Levels of social support and attitudes towards suicide may represent Motivational Moderators which affect the likelihood of entrapment giving rise to thoughts of self-harm or suicide. Several studies point to social support as an important contributor to suicide risk (Copeland et al., 2019; Kleiman & Liu, 2013; O'Connor & Nock, 2014), as well as adjustment after a death (Andriessen et al., 2015). Bereaved adolescents may experience feelings of loneliness or loss of a confidant, which accounts for the increased vulnerability for self-harm (Pitman et al., 2014).

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was thus used to measure perceptions of social support adequacy from family, friends, and significant others. Each of the three subscales (family/friends/significant other) is assessed via four items. Responses are given using a 7-point scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree), e.g., "*My friends really try to help me*". A total overall score or three subscale scores for the different sources of support can be calculated by summing the relevant items. Subscales were used here to differentiate the impact of different sources of support. The MSPSS has been validated with adolescent samples, and has demonstrated good psychometric properties including internal consistency ranging from  $\alpha = .93$  to  $.94$  for the total 12-item score, and from  $\alpha = .87$  to  $.95$  for the subscales (Abbott & Zakriski, 2014; Cauty-Mitchell & Zimet, 2000).

*Stigma.* The IMV model proposes that people who hold fewer negative attitudes towards suicide are more likely to consider suicide as a feasible option (O'Connor & Kirtley, 2018). On investigating attitudes and stigma surrounding suicide among young people aged 14-21, Bartik et al. (2015) found that the majority of people were reluctant to talk about suicide, and viewed it as taboo. Those bereaved by suicide were also slightly less likely to

view suicide as resulting from isolation and depression, compared to a general population sample, and were more likely to describe people who die by suicide with stigmatising terms, i.e., suicide being “immoral”, “unfair”, and “unjustifiable”. In addition, those bereaved by suicide were also more likely than the general community sample to consider suicide using glorifying or normalising terms, such as “strong”, “noble”, and “brave”. Overall, they expressed openness to conversations about suicide, yet displayed stigmatising beliefs about it. A potential consequence of endorsing such beliefs is a reluctance to engage in discussions about suicide and seek help, thereby increasing risk of SSHTBs.

The Short Form of the Stigma of Suicide Scale (SOSS; Batterham et al., 2013b) was therefore used to assess attitudes and stigma towards people who die by suicide.<sup>3</sup>

Respondents were asked to rate how much they agreed with one-word descriptors of people who take their own lives, on a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree, e.g., “*cowardly*”, “*lonely*”, “*noble*”. Three subscales (stigma, isolation/depression, and glorification/normalisation) can be calculated by summing the relevant items for each. Internal consistency for the subscales have been reported in the literature as  $\alpha = .88$ ,  $\alpha = .80$ , and  $\alpha = .78$ , respectively (Batterham et al., 2013b).

#### ***4.3.2.2.5 Volitional Phase Variables.***

*Suicide vs non-suicide bereavement.* Exposure to the suicidal or self-harming behaviours of others is highlighted as a key volitional factor in the transition from ideation to attempts, where it is expected that people who self-harm are more likely to have been

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<sup>3</sup> The Stigma of Suicide Scale measures stigmatising views about people who die by suicide generally, rather than in relation to a specific death. Alternative measures of stigma were considered, such as the Grief Experience Questionnaire, as this would have allowed for capturing perceived stigma in relation to a specific death. However, it was deemed that not all participants would have been bereaved, and furthermore, the IMV model implicates attitudes to suicide generally as a factor within the motivational phase of the model, hence a general measure of stigma was chosen.

exposed to such behaviours than those with no history of self-harm, or compared to those with self-harm thoughts but no actions (O'Connor & Kirtley, 2018). Converging evidence suggests exposure to fatal and non-fatal self-harm of others is indeed an important predictor of future SSHTBs (Hawton, Saunders, et al., 2012; Mars et al., 2019a; O'Connor & Nock, 2014; O'Connor, Rasmussen, et al., 2009a). As described in Chapter 3, exposure to suicide deaths may increase the risk of self-harm compared to non-suicide deaths. Previous research also demonstrates a strong link between adolescent exposure to non-fatal self-harm within peer groups or family members and subsequent self-harm (De Leo & Heller, 2004; Hawton, Saunders, et al., 2012; Mars et al., 2019a; McMahon et al., 2013; O'Connor, Rasmussen, et al., 2009a). Research specifically testing the IMV model supports this prediction (Dhingra et al., 2015; Mars et al., 2019b), although adolescent studies are limited.

As in Section 4.3.2.2.3, three questions about bereavement taken from the LEC (Hawton et al., 2006) enquired about experiences with the death of an immediate family member, someone close, or a family or friends' suicide. These items were used to create a new variable denoting whether the participant was suicide or non-suicide bereaved.

*Self-harm of family or friends.* Two questions also taken from the LEC (Hawton et al., 2006) enquired about self-harm behaviours among one's friends or family, e.g., "*Has anyone among your [family]/[close friends] attempted suicide or deliberately harmed themselves?*"

#### **4.3.2.2.6 Final Questions.**

*Final open-ended questions.* Final open-ended questions were added at the end for participants who finished early and wished to provide additional comments or suggest things young people can do to lift their mood when they are feeling sad or depressed.

#### **4.3.2.3 Rationale for Analytical Approach.**

As explained in Section 4.3.1.2, logistic regression was used as the main analytical approach to analyse the data from Study 1, and a similar approach was appropriate here given the similar nature of the data and research questions being addressed. Three separate hierarchical multinomial logistic regressions were conducted for each of the two time points (cross-sectional and longitudinal predictions), representing tests of the pre-motivational, motivational, and volitional phases of the model. Predictor variables at both times points were those assessed at baseline, including bereavement status and negative life events in the pre-motivational phase test of the model; defeat, entrapment, coping, self-esteem, social support, and stigma in the motivational phase test of the model; and cause of bereavement (suicide or non-suicide) and self-harm by family or by friends in the volitional phase test. The outcome measure (self-harm group) was divided into one of three possible options: enactment, ideation with no actions, or controls with no history of self-harm thoughts or actions. Cross-sectional analyses used baseline self-harm data as the outcome measure, and longitudinal analyses used follow-up self-harm responses. Furthermore, an examination of whether bereavement was associated with defeat and entrapment (to further test predictions of the IMV model) was explored with two hierarchical multiple regressions for each time point, given that these outcomes were measured on a continuous scale. As noted above, all analyses controlled for age, gender and mood, given their associations with self-harm and bereavement, and for consistency with the wider literature (Berg et al., 2016; Bolton et al., 2016; Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009; Kaplow et al., 2010; O'Connor et al., 2012). Chapter 6 provides further details on how this study was conducted, the specific analytic steps taken to conduct the above analysis, and also presents the research findings which informed the design of Study 3.

## **4.4 Study 3**

### **4.4.1 Study 3: (A) *Semi-Structured Interviews***

Findings from Study 2 suggested that bereavement or the specific cause of death are not determining factors in self-harm outcomes, but rather, circumstances of the young person's life such as coping and social supports play an important role in shaping experiences (see Chapter 6). The wider bereavement literature also highlights that characteristics of the death, of the person who died, of the young person themselves, and other pre- and post-loss features surrounding the death influence the grieving process (Akerman & Statham, 2014; Andriessen et al., 2015, 2016; Bui, 2018; Nader & Salloum, 2014). Yet, how exactly young people perceive these experiences and make sense of their world has still to be understood. Qualitative interviews were thus chosen as the approach to elicit participants' narratives and address Research Question 5.

#### **4.4.1.1 Rationale for choice of semi-structured interviews.**

Semi-structured interviews were selected as a way to capture participants' narratives, or personal stories or accounts of their lives as told by individuals (Riessman, 2008). Other qualitative approaches were also considered, such as focus groups and qualitative surveys. Focus groups can be useful for discussing sensitive topics where individuals can share their experiences in a supportive group environment (Braun & Clarke, 2013). However, where the aim of the research is to elicit detailed *individual* narratives of people's experiences (rather than collective views), these voices may become lost within a group context (Braun & Clarke, 2013; Gill et al., 2008). Furthermore, the logistical challenges of arranging group conversations with young people based across Scotland, and recruited from various sources, would have made focus groups impractical. Qualitative surveys, despite being suitable for researching sensitive topics given the anonymous, private nature of responding and speed of

administering (Braun & Clarke, 2013), fail to capture the richness of data offered by interviews. The lack of flexibility in the questioning precludes further probing of responses which would be possible in interview studies (Frith & Gleeson, 2008). Interviews are particularly suited to answering questions about lived experiences and uncovering how people understand and make sense of issues themselves. This is especially the case where individuals have a high personal stake in a topic, more so than focus groups or qualitative surveys (Braun & Clarke, 2013). Interviews are also appropriate in research where participants may not wish to disclose sensitive issues with an unknown group of individuals, such as in focus groups (Gill et al., 2008).

Semi-structured interviews, which involve a series of key questions to guide conversation while allowing flexibility for the interviewer or participant to further explore areas of interest (Braun & Clarke, 2013; Gill et al., 2008), were selected as the most appropriate approach for this study. Such interviews can be helpful in eliciting stories while allowing participants to provide a full account of their own experiences. Structured interviews on the other hand, which stick to pre-determined questions with little scope of elaboration or follow-up, would not have allowed for an in-depth look at participants' accounts. Unstructured interviews, with a lack of organisation and direction, could have been potentially unhelpful and confusing for participants and not enabled the corroboration of findings from the quantitative studies (guided by theory) (Gill et al., 2008).

In addition, the perspective of social constructionism was employed to help interpret participants' narratives within their own views and interpretations of the world. Social constructionism posits that individuals' understandings and perceptions of events are products of their social interactions with others (Braun & Clarke, 2013; Burr & Dick, 2017). It has been suggested that the study of grief and bereavement be approached from the perspective of social constructionism, given that individuals will construct their reality and

search for meanings after a death within their broader community and cultural surroundings, rather than purely at an individual level (Neimeyer et al., 2014). Semi-structured interviews were therefore an appropriate method to explore these understandings and interpretations with participants.

The interview topic guide (see Appendix B) developed for this study was informed by significant findings from the previous chapters, without being constrained in a specific direction. Specifically, the variables emerging from Study 2 as significant (coping strategies, social support, and stigma around suicide) were included as topics for discussion (see Chapter 6). Questions were ordered such that the interview would first build rapport by commencing with more general questions, before delving into specific conversation about the bereavement. Domains covered: background information on the person who died, their relationship, knowledge about the death, impact on daily life, coping strategies, social supports, and beliefs about suicide. The interview schedule was piloted during the initial interviews, and following feedback from these participants, was slightly adjusted to include additional probing about any multiple losses experienced. Interviews were audio-recorded with participants' consent for the purposes of accurate transcription.

#### **4.4.1.2 Rationale for analytical approach.**

A number of methods were considered for analysing the data concerning the lived experiences of young people who had been bereaved, including Interpretative Phenomenological Analysis (IPA), grounded theory, and thematic analysis. IPA examines how people make sense of a given phenomenon or major life experience (Smith et al., 2009), and has specific theoretical underpinnings. It derives from a phenomenological epistemology, where it explores how people perceive and talk about their lived experience in its own terms, setting aside pre-existing theoretical preconceptions (Smith & Osborn, 2015). It is also

informed by hermeneutics, taking the view that interpretation is required on the part of the researcher to make sense of individuals' own accounts, and is idiographic in its primary focus on examining the experience of individuals rather than delving into general claims (Smith et al., 2009; Smith & Osborn, 2015). Accordingly, IPA relies on small, homogeneous samples to explore these individual accounts in detail (Murray & Wilde, 2020), and is not theoretically flexible like other approaches (Braun & Clarke, 2013). Because this study aimed to explore how adolescents with varied experiences and backgrounds experienced life before and after a death, thematic analysis was felt to be a more appropriate analytical technique than IPA.

Grounded theory can be useful to understand how individuals make meaning of their experiences, and places a focus on the building of theory from data, while emphasising the social processes behind phenomena (Glasser & Strauss, 1967; Holloway & Todres, 2003). The methods used for collecting and analysing data are therefore geared towards theory development, and several versions of grounded theory exist which can be applied from various epistemological positions (Braun & Clarke, 2013). However, this approach was primarily discounted, as the aim of the study was not to build theory but rather explore experiences in a manner guided by findings of Study 2, which was informed by the IMV model (and wider theory on suicide).

Reflexive thematic analysis following Braun and Clarke (2006, 2013) was chosen as the most appropriate analytical method given its accessibility, flexibility, and theoretical freedom, consistent with the pragmatic approach adopted in this thesis. This analytical approach consists of a six-step process which aims to identify and report patterns (or themes) of meaning within the data, and tends to be a recursive process involving movement back and forth across the different stages of analysis. Themes were identified both inductively, in that the data were analysed without a pre-existing coding frame, and also deductively, insofar as

being driven by a theoretical interest (i.e., suicide theory) (Braun & Clarke, 2006, 2013). The latter informed the production of interview guides and initial coding, but was not applied strictly throughout, as not all participants recognised self-harm as being important within their own stories. Furthermore, thematic analysis can be done on a semantic level, where data are analysed in a more descriptive way, or latent, where a more interpretative approach is taken to examine underlying themes (Braun & Clarke, 2006). In this case, a latent approach was selected to interpret and understand the accounts of young people relating to their experiences of bereavement. A detailed description of how this study was conducted, including the specific steps involved in this analysis as well as the research findings, is provided in Chapter 7.

The study initially intended to recruit participants bereaved by various causes of death, in order to explore varied experiences but also to compare the accounts of different groups (i.e., those bereaved by suicide compared to other deaths). However, the COVID-19 pandemic began during this recruitment process and many organisations which had agreed to participate were suddenly forced to close, schools and universities were moved to remote learning, and face-to-face meetings became unfeasible given the risk of virus transmission and national lockdowns. At this point 13 individuals had participated in the study (see Chapter 7 for details on the recruitment process). One participant had experienced a main bereavement as a result of a suicide, while other participants were bereaved by various other causes, and may have also reflected on experiences following the suicide of someone they knew. As the findings from Study 2 did not implicate specific cause of death as a significant factor in determining outcomes (see Chapter 6), and as the continuation of recruitment was not feasible due to the pandemic, data collection was brought to an end. It should be noted that at this point, it was felt that saturation had likely been reached for the data looking at bereavement experiences generally (i.e., not comparing groups). It was thought that

additional interviews would produce little to no new findings (i.e., generating novel coding or themes) in relation to the main aims of the study, and there was sufficient data available to proceed to a final thematic framework (Fusch & Ness, 2015; Guest et al., 2006). The data gathered were thus analysed with the acknowledgement that conclusions could not be made comparing suicide with other bereavements.

#### **4.4.2 Study 3: (B) Self-Harm Questionnaire**

In addition to the interviews which focussed on the lived experience of loss, it was also of interest to examine how adolescents who took part in the research understood and experienced self-harm, given that the wider focus of this PhD concerns experiences of self-harm in relation to bereavement, as well as testing a relevant theoretical model of suicide. Asking explicitly about self-harm as part of the interview guide was considered, however, this idea was discarded as it was felt that not all young people may be able to speak to this experience, and such questions might disrupt the flow of conversation around bereavement if they did not organically flow from participants' own narratives. An alternative was to employ a brief quantitative component to the data collection to gather this information directly (also reducing participant burden by avoiding a longer interview schedule). To this end, a brief self-harm questionnaire (Appendix C) similar to that used in Study 2 was presented to gather information on the prevalence and nature of self-harm among the sample. Specifically, the CASE Study questionnaire (Hawton et al., 2006) item, "*Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*" was asked. If participants responded they had previously self-harmed, follow-up questions enquired about the first and last time they self-harmed, timing in relation to their bereavement, motivations, frequency, and methods. Two questions from the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock et al., 2007) additionally asked

about thoughts of non-suicidal self-injury and of suicide: “*Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)*”, and “*Have you ever had thoughts of killing yourself?*” The psychometric properties of the SITBI have been demonstrated in previous literature (Nock et al., 2007).

#### **4.4.3 Study 3: (C) Card Sorting Task for Self-Harm**

For those participants who wished to elaborate on any past experiences of self-harm, a novel card sorting task, the Card Sort Task for Self-Harm (CaTS; Townsend et al., 2016), was used to investigate the temporal dynamics of this behaviour (only applicable to those who endorsed a history of ideation and/or enactment in the brief questionnaire). A list of card items is included in Appendix D. It has previously been used with young people between the ages of 13-22 who engage in self-harm behaviours (e.g., Lockwood et al., 2020; Townsend et al., 2016; Wadman et al., 2017), but has also been suggested by its author as a useful way to understand the pathways to self-harm ideation (Townsend et al., 2016), and thus, was offered to young people who reported either of these experiences. The task seeks to understand the temporal dynamics surrounding past episodes of self-harm, and utilises a series of cards which list potential thoughts, feelings, events, behaviours, services and supports, and outcomes that may be related to an individual’s first ever and most recent episode of self-harm. Participants are asked to select cards which are relevant to them (additional blank cards are provided to add concepts that are missing), and position them on time stamps in the order in which they occurred (6 months prior, 1 month prior, 1 week prior, 1 day prior, 1 hour prior, during, and afterwards). The researcher is present during the task, so participants can elaborate on their experiences if they wish, or ask questions about the meaning of individual items. The aim of the task is to understand the complexity of self-harm and map the sequence

of events preceding and following an episode of self-harm, while allowing individuals to share their own narratives as they wish.

The task was originally developed based on the wider self-harm literature, including known key risk factors and theoretical models, as well as input from a young persons' advisory group (Townsend et al., 2016). It allows for examining a large number of variables at the same time, and those variables which are selected as being relevant to individual narratives by the young people themselves (Wadman et al., 2017). It has also been recommended as a means to facilitate and build discussion with young people in research concerning a sensitive and complex topic like self-harm (Lockwood et al., 2020). The CaTS can be helpful to guide discussion with an age group who are still undergoing a process of emotional, social and cognitive development, and who may struggle to understand or express their thoughts or behaviours (Guyer et al., 2016). In this way, the tangible and interactive nature of the activity can help participants visualise patterns and explain complex experiences more readily (Lockwood et al., 2020), and can be a useful tool to build learning on the topic. Completed card sequences were photographed with participants' consent. As suggested by Wadman et al. (2017), participants were asked to rate their confidence about the accuracy of their recollections using a 5-point Likert Scale from 1 (not at all confident) to 5 (extremely confident). This was completed twice, after completing the task for the first and last episode of self-harm.

#### **4.4.3.1 Rationale for analytical approach.**

Previous research using the CaTS has employed lag sequential analysis (also referred to as behaviour sequence analysis) to examine the sequential pattern of the data (e.g., Townsend et al., 2016; Wadman et al., 2017). This technique uncovers statistically significant transitions between factors which lead to self-harm by testing for cross-dependencies

between pairs of cards (Faraone & Dorfman, 1987). It helps to determine whether transitions between item pairings (antecedents and sequiturs) occur more frequently than would be expected by chance (Marono et al., 2017b; Wadman et al., 2017). It is difficult to estimate the required sample size for a sequential analysis in advance, given that the aim of the analysis is to test the hypothesis continuously with each new data point until it can be either accepted or rejected (Riffenburgh & Gillen, 2020). Samples which are too small may result in patterns not being perceptible (Riffenburgh, 2012). Other authors using this method in psychological or behavioural sciences (including self-harm research) have typically employed between 19 and 78 individuals per condition or analysis (Keatley et al., 2016; Lawrence et al., 2010; Marono et al., 2017a, 2017b; Taylor et al., 2020; Townsend et al., 2016; Wadman et al., 2017; Zourbanos et al., 2015).

As mentioned in Section 4.4.1.2, the COVID-19 pandemic halted recruitment for this study, which at this point had collected CaTS data from eight individuals. As a result of the small sample size, lag sequential analysis, which had been considered as the main analytical approach of interest, was deemed to be not suitable here. In a qualitative study by Lockwood et al. (2020), a total of 15 adolescents were sampled, and the CaTS task was used primarily to facilitate discussion with young people and explore their thinking surrounding self-harm. Therefore, in a similar way, the CaTS data gathered here is described in Chapter 7 with reference to how the findings relate to predictions from the IMV model more generally. Descriptive statistics and selected card frequencies are also presented in Chapter 7.

#### **4.5 Ethical considerations for researching suicide, self-harm and bereavement with young people**

This section provides a discussion of the main ethical concerns for research conducted with adolescents in the field of suicide, self-harm, and bereavement, and specifically focusses

on issues which were considered in advance while designing this programme of research. Over the course of data collection, however, some specific ethical considerations and challenges arose during Studies 2 and 3. A further discussion of these arising issues is presented in the respective Chapters 6 and 7, as they describe unanticipated matters which were dealt with and learned from as the research progressed.

The research contributing to the secondary data analysis (Study 1) was given ethical approval from the University of Stirling Psychology Department Ethics Committee, and Studies 2 and 3 were granted approval from the University of Strathclyde Ethics Committee (UEC17/36 and UEC18/73). The following paragraphs relate mainly to the rationale behind ethical considerations for Studies 2 and 3, which the researcher had control over.

Given the sensitive topic of study, there is a potential risk that asking adolescents about their experiences with self-harm, suicide, and bereavement may cause some harm or discomfort. Concern relates to research questions and interview topics which may be felt to be intrusive or evoke painful memories, potentially causing distress. However, existing evidence relating to bereavement (Butler et al., 2018; Dyregrov et al., 2011; Hawton, Houston, et al., 2003; Omerov et al., 2014; Wong et al., 2010) and self-harm or suicide (Biddle et al., 2013; Dazzi et al., 2014; DeCou & Schumann, 2018; Hasking et al., 2015; Robinson et al., 2011) shows that there are in fact little to no iatrogenic effects of research participation. Any negative impacts tend to be immediate rather than long-lasting (Jorm et al., 2007).

Indeed, a consistent finding is that involvement in these types of studies may have benefits to participants. In research concerning bereavement experiences, such as psychological autopsy interviews following suicides, participation may be therapeutic and facilitate the process of coping with loss (Dyregrov et al., 2011; Hawton, Houston, et al., 2003), allowing individuals to vent their painful feelings and feel that they have contributed

to suicide prevention (Wong et al., 2010). There is also evidence that young people enjoy the experience of talking about bereavement in interview studies (Paul, 2015). Similarly, self-harm research may provide individuals with a rare opportunity to talk at length about their experiences, release feelings and gain new perspectives (Biddle et al., 2013), and provide a sense of empowerment, relief, and purpose (Jorm et al., 2007). Importantly, being able to acknowledge and discuss suicide may actually reduce suicidal ideation and improve mental health (Dazzi et al., 2014; Mathias et al., 2012). Evidence also exists that young people enjoy partaking in suicide or self-harm research (Hasking et al., 2015; Townsend et al., 2016).

Despite the low probability of iatrogenic effects, ethical considerations were paramount when designing the programme of research for this PhD. First of all, adolescents in Studies 1 and 2 were asked not to take part if they had been bereaved within the last six months (acknowledging the limited conclusions that could be made in relation to acute grief reactions based on this requirement). This follows recommendations from the literature that a minimum of six months should pass after a death before participants are contacted for research purposes (Butler et al., 2017; Dyregrov et al., 2011). Potential participants were fully informed about the nature of the research and the questionnaire content (Study 2) or interview topics (Study 3) in advance, both in writing (Participant Information Sheets and Consent Forms for Participants and Parents/Guardians are included in Appendices E-H) and verbally (by school assembly in Study 2, or telephone call/email in Study 3). This information was also relayed to relevant gatekeepers, including Local Education Authorities, Head Teachers, classroom teachers, and parents (in Study 2), as well as supporting organisations and parents of under 16 year olds (in Study 3). This sought to ensure that potential participants were not taken by surprise by the nature of the research, and were given ample opportunity to consider their involvement and ask any questions they wished to in advance.

For Study 2, active parental consent was required prior to speaking to pupils about the study; however, as will be discussed in Chapter 6, significant challenges with recruitment and slow study uptake led to discussions around parental consent procedures and whether an alternative approach was needed. The literature around parental consent shows that requiring active consent may in fact yield skewed samples, low recruitment rates, and inaccurate findings by underrepresenting individuals from the population of interest (Kelly & Halford, 2007). Following an amendment approved by the ethics committee, one school then opted to use passive parental consent. All pupils taking part from schools were asked to provide written informed consent prior to participating. For Study 3, active parental consent was only required for under 16 year olds (in line with the British Psychological Society's Code of Human Research Ethics; 2021), which did not apply to any participants; participants themselves provided written informed consent in order to take part.

Those who consented to take part were reminded of their right to withdraw from the study at any point without detriment and without having to provide an explanation, and were informed that they did not need to answer any questions they did not wish. Some individuals in Study 2 exercised their choice about participating by opting out of the study once it had begun (i.e., by not completing the questionnaire). Consent to continue was verbally sought at a later point during the interview study (Study 3). Quantitative surveys (Study 2) were counterbalanced and included final open-ended questions to prevent pupils within the same room gauging each other's answers (e.g., where participants might take longer to complete the questionnaire due to spending more time on items on self-harm or bereavement, which may have required lengthier textual responses). Questionnaires were completed privately and pseudo-anonymously using participant-generated ID codes. Transcribed interview data (Study 3) were pseudo-anonymised by removing all identifying information in order to preserve anonymity (participants were given the option to choose their own pseudonyms).

Participants in Study 2 took part during school hours (with school staff at hand), and in Study 3 were encouraged to schedule the interview at a time and place most suitable to them, and given the option to have an adult present if they wished. Following completion of the studies, all participants were provided with a list of useful sources of support and information, as well as the research team's details to take away with them (Appendices I and J).

A mood gauging task (based on Biddle et al., 2013; Appendix K) was incorporated into Study 3 to measure participants' emotional state at the start and end of the interview (and CaTS task, if completed), and was used to monitor changes in wellbeing, and explore any variations during the debrief. Participants were presented with the question, "*How are you feeling?*", and a 10-point visual analogue scale with equally spaced numbers depicted responses from 0 (poor emotional state, illustrated with a sad face) to 10 (best possible emotional state, illustrated with a happy face). A neutral face was placed in the middle to aid understanding. Participants gave their response by marking a point on the scale, and any changes in ratings after the interview (or CaTS task) were explored during the debrief. Although there were slight variations in ratings across time for some participants, no statistically significant differences were found between pre-interview and post-interview visual analogue scale ratings, nor between post-interview and post-CaTS ratings (see Chapter 7), suggesting that the study did not result in significant deteriorations to participants' wellbeing.

Protocols were in place in the event that individuals felt distressed or disclosed that there was serious risk of harm to themselves or others, which included supporting the young person to access help and support from a trusted staff member, parent, or other appropriate person, and limits to confidentiality were discussed with participants in advance. While acknowledging the debate surrounding the ethics of participant remuneration (Graham et al., 2013; Institute of Medicine (US) Committee on Clinical Research Involving Children, 2004;

Taplin et al., 2019), individuals taking part in the interview study (Study 3) were given a £10 shopping voucher as a token of appreciation for their time and acknowledgement of their contribution.

Finally, it was acknowledged that research on sensitive topics like suicide and bereavement may take a toll on the researcher. Repeated exposure to detailed narratives surrounding personal traumatic events can have adverse emotional, psychological and physical consequences for researchers, potentially leading to burnout, frustration, desensitisation, helplessness and guilt, as well as secondary trauma (Butler et al., 2017; Dickson-Swift et al., 2016; Lloyd-Richardson et al., 2015; McKenzie et al., 2016). This may especially be the case for researchers from non-clinically trained backgrounds (McKenzie et al., 2016). Arrangements were put in place to minimise any potential for harm to the researcher, which included: training (e.g., courses on researching sensitive topics, working with bereaved adolescents, or building resilience for researchers), peer support through a network of fellow early career researchers, and regular access to supervision and debriefing, especially during the data collection phases.

#### **4.6 Positionality and Reflexivity**

It is worth acknowledging the researcher's role in the studies, as one's experiences, values, and perspectives can shape the research process and the data or findings. It is important to critically reflect on and recognise how backgrounds and assumptions shape the knowledge that we produce (Braun & Clarke, 2013). In this case, being a female researcher, not native to Scotland, with a psychological research background and work experience in mental-health related social care, has shaped the researcher's views of the world. It is acknowledged that this may have influenced the formulation of research questions, data collection methods, analytical choices, and decisions in reporting findings. To account for

this, constant reflection on one's own assumptions and biases was critical, and facilitated through documenting in a reflective diary throughout Study 3 as is recommended in the literature (Braun & Clarke, 2013), and in discussions via the supervisory process. A reflective journal also recorded thoughts and observations made following each interview, the transcription process, and during data processing and analysis, to keep track of important considerations and decisions made. An excerpt of an entry is presented in Appendix L. The coding and analysis for Study 3 were also independently cross-checked by a supervisor (SP) to strengthen the validity of findings, as can be common in this type of research (e.g., Birt et al., 2016; Hill & Dallos, 2012), though it was acknowledged that this is not always recommended with reflexive thematic analysis where coding is expected to reflect the researcher's subjectivity (Braun & Clarke, 2019).

In Study 3, face-to-face interviews were carried out being mindful of the power dynamic. An effort was made to create a physical setting which did not emphasise the researcher-participant power imbalance. For instance, participants were encouraged to identify a location and time to meet that suited them (though not all participants expressed a preference), and the researcher aimed to create as relaxed and informal an environment as possible. Participants were reminded that there were no right or wrong answers and the discussion was to learn about their views as experts of their own experience. Use of the CaTS task also aimed to reduce the power imbalance by establishing the young person as the expert and allowing them to lead the discussion surrounding the task (and whether they chose to elaborate on their responses or not). Finally, participants were compensated for their time and input to the research. During the analytic process, effort was made to have an equal representation of all groups' views, without giving preference to any particular types of experiences or opinions. Regular reflection and supervision was also held throughout the research process to discuss arising issues and reflect on learnings.

## 4.7 Chapter Summary

### Key points for this chapter:

- Three studies using mixed methods explore the topic of bereavement and self-harm among Scottish adolescents within this thesis.
- Studies 1 and 2 comprise of quantitative, theory-based investigations, both cross-sectional and longitudinal, to explore whether bereavement experiences and relevant psychosocial factors are associated with self-harm outcomes.
- Study 3 offers a more in-depth look at young people's experiences through a semi-structured interview aimed at understanding and interpreting participants' own experiences and the meanings they give to them. An additional quantitative questionnaire and card sorting task provide further valuable insights into experiences of self-harm and the factors leading to self-harm among a sample of adolescents.

### Questions for subsequent chapters:

- What is the prevalence of bereavement among a sample of Scottish adolescents?
- Are experiences of bereavement associated with risk of suicidal or self-harming thoughts and behaviours, either cross-sectionally or longitudinally?
- Can theory-driven factors help explain the development of adverse outcomes including self-harm among bereaved adolescents?
- What are the lived experiences of adolescents who are bereaved in Scotland?

### Next steps:

- The following three empirical chapters will detail the specific steps of data collection and analysis, as well as findings for each of the three studies undertaken during this PhD. Study 1, which follows in the next chapter, presents a cross-sectional secondary

analysis of an existing schools dataset examining adolescent experiences of bereavement and self-harm.

## Chapter 5 Study 1: Exploring Cross-Sectional Associations Between Adolescent Bereavement Experiences and Self-Harm Ideation and Enactment

### Abstract

### Background

Chapter 1 provided an account of the Integrated Motivational-Volitional Model of Suicidal Behaviour, which proposes that bereavement experiences represent a background factor that set the broader context for suicide. Additionally, specific experiences of suicide loss may also be situated within the Volitional phase of the model to distinguish those who ideate from those who act on self-harm. This study aimed to test these predictions.

### Methods

A secondary analysis of cross-sectional data from the Lifestyle and Coping Survey was conducted. Data came from 2008 Scottish secondary school pupils (age:  $M = 15.4$ ,  $SD = 0.8$ , female  $n = 1065$ ) who took part.

### Results

A total of 159 pupils (7.92%) reported having experienced a suicide death, and a further 1159 (57.72%) reported the death of someone in their family or someone else close, which was not caused by suicide. Multinomial logistic regressions predicted one of three outcomes: lifetime self-harm enactment ( $n = 272$ ; 14%), lifetime self-harm ideation with no actions ( $n = 129$ ; 6%), and no history of self-harm thoughts or actions ( $n = 1592$ ; 79%). Having experienced a loss by suicide was significantly associated with self-harm group, with those in the enactment group more likely to report exposure than controls. In a separate analysis, bereavement status and experiencing a non-suicide death were not significantly associated with outcomes.

## **Conclusions**

This study provides valuable information on the prevalence of bereavement among Scottish youth and offers support for an emerging theoretical model of suicide. Findings are evaluated in relation to the extant literature and the wider aims of this thesis. The key limitation relates to the lack of in-depth data on bereavement and factors which may accelerate or buffer the impact of a loss, which provided directions for Study 2 of this PhD.

### **5.1 Introduction**

As reported in Chapter 1.1, it is not known exactly how many people are impacted by each suicide death; however, recent data suggests that suicide is not an uncommon experience among adolescents (Andriessen, Rahman, et al., 2017; Cerel & Roberts, 2005; Cerel et al., 2005; Swanson & Colman, 2013). Given that each suicide is thought to affect between 6 and 135 individuals (Andriessen & Krysinaka, 2012; Berman, 2011; Cerel et al., 2018; Shneidman, 1972), this could equate to over 100,000 people in Scotland being affected by suicide in the last year, and how many of these are adolescents remains unknown.

As discussed in Chapter 1.1, over half of young people (52%) under 20 years old who died by suicide in England and Wales had a history of self-harm (University of Manchester, 2017). Studies have consistently shown that self-harm is one of the strongest predictors of completed suicide (Hawton, Saunders, et al., 2012). Given that community-occurring self-harm represents only the ‘tip of the iceberg’, with the majority of young people not presenting to hospital settings (Geulayov et al., 2018; Hawton, Saunders, et al., 2012; McMahon et al., 2013), research is required to better understand and quantify this behaviour among adolescents within the community. Research with community samples in Scotland (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009; Quigley et al., 2017b; Russell et al., 2018) as well as in other parts of the UK (Hawton et al., 2002; McMahon et al.,

2010) suggests that engagement in self-harm thoughts and behaviours is a common occurrence among adolescents. Further work is thus critical to understand the factors contributing to self-harm in order to identify those young people most at risk who may benefit from timely intervention.

Bereavement is thought to be a common experience among young people in the UK based on data from a small number of national studies (Childhood Bereavement Network, 2016; Fauth et al., 2009; Harrison & Harrington, 2001; Parsons, 2011). However, there is a dearth of research on the extent of bereavement among Scottish adolescents specifically, which could expand on the important findings from Paul and Vaswani (2020) showing a prevalence of 62% among children aged 10. There is also a lack of knowledge on rates of bereavement by different causes, including suicide.

Empirical research reviewed in Chapters 2 and 3 suggests a link between experiences of bereavement and SSHTBs. Findings from the systematic review (Chapter 3) showed that across the literature, bereavement by suicide is associated with elevated risk of subsequent suicide deaths compared to other bereavements. However, the association between experiencing different causes of deaths and subsequent self-harm (hospitalisations or self-reported outcomes) was less clear, and there was also a lack of support indicating that suicide bereavement is associated with elevated suicidal ideation. In addition, particularly little is known about the impact of non-familial suicides, given that much of the work in this area to date has been conducted with biological relatives from linked population data. Only three papers included in the systematic review considered deaths of friends and/or acquaintances (Andriessen, Hadzi-Pavlovic, et al., 2018; McIntosh & Kelly, 1992; Pirelli & Jeglic, 2009). Thus, while there is converging evidence that family suicides may increase the risk of adolescent SSHTBs, further work is needed to explore deaths which occur outside of the

family context, as well as using representative samples of young people in the community, and validated measures, as highlighted in Chapter 3.

Finally, a recurring limitation of research in this area has been a lack of grounding in theory. As discussed in Chapter 1, bereavement experiences may be featured in two areas of the IMV Model: the pre-motivational phase, where background vulnerability factors, triggering events and environmental factors provide the circumstances for suicidal ideation or intention to emerge; and the volitional phase, where it is thought that exposure to suicide differentiates those who ideate about self-harm or suicide from those who engage in it (O'Connor & Kirtley, 2018).

### ***5.1.1 Study Aims and Hypotheses***

As discussed in the methodology chapter, this study derives from an analysis of an existing cross-sectional dataset collected as part of the Lifestyle and Coping Survey with secondary schools in Scotland and Northern Ireland. Only data which pertains to Scotland is analysed here. Original findings have been published elsewhere (e.g., Scottish data is reported in: O'Connor, Rasmussen, et al., 2009a, 2009b; O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009). Of particular interest here are the variables related to bereavement experiences which have not been explored in detail elsewhere. In order to tackle Research Questions 1 and 2 introduced at the end of Chapter 3, three main aims of this study are established:

1. Determine the prevalence of all-cause bereavement among a sample of adolescents in Scotland, and rates of bereavement specifically by suicide.
2. Determine the prevalence of self-harm ideation and enactment among a sample of adolescents in Scotland.

3. Explore the association between bereavement experiences (by any cause, or specifically by suicide) and self-harm (ideation and enactment) cross-sectionally.

Adolescents were grouped into one of three categories depending on their history of SSHTBs: controls (reporting no history of self-harm thoughts or actions), ideation (reporting self-harm ideation but no actions), and enactment (reporting self-harm behaviours) groups.

Specifically, to address Aim 3, based on predictions from the IMV model, two separate analyses were planned, where it was hypothesised that:

- a.) Ideation and enactment groups will differ from controls, but not each other, on having experienced any bereavement (pre-motivational phase test).
- b.) Ideation and enactment groups will differ from controls, as well as each other, on exposure to suicide deaths (volitional phase test). Exposure to non-suicide deaths is not expected to differentiate groups.

## **5.2 Method**

### **5.2.1 Participants**

As described elsewhere (O'Connor, Rasmussen, et al., 2009a, 2009b; O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009), a total of 2008 pupils from Scottish secondary schools in Glasgow and Stirling were recruited from 2006-2007 (45 schools were invited). The sample was broadly representative of the population in terms of school size and type, ethnicity, educational attainment, and socioeconomic deprivation (O'Connor, Rasmussen, Miles, et al., 2009). All pupils were in Years S4 or S5 and in classes where at least 90% were aged 15-16 years (range = 14-18,  $M = 15.4$ ,  $SD = 0.8$ ). 939 stated they were male, 1065 female, and 4 did not provide this information.

Males ( $M = 15.4$  years,  $SD = 0.8$ ) did not differ significantly from females ( $M = 15.3$  years,  $SD = 0.8$ ) in terms of age,  $t(1996) = 1.47$ ,  $p = .143$ . With regards to the questionnaire

measures at baseline, there were no significant gender differences in whether participants were: bereaved by an immediate family member,  $\chi^2(1, n = 1993) = 0.91, p = .34$ ; and specifically bereaved by a suicide death,  $\chi^2(1, n = 1993) = 0.78, p = .378$ . There were, however, significant gender differences in mood. Females reported higher depressive symptoms,  $t(2002) = -2.65, p = .008$ , and males reported higher anxious symptoms,  $t(2000) = 7.97, p < .001$ . There were also significant gender differences in self-harm group,  $\chi^2(2, n = 1994) = 82.97, p < .001$ , whether participants were bereaved or not (any cause),  $\chi^2(1, n = 1997) = 11.78, p = .001$ , and specifically whether participants were bereaved by a non-suicide death,  $\chi^2(1, n = 1997) = 7.72, p = .005$ . As a result of the significant sex differences across several variables in this study, and consistent with the wider literature, statistical analyses controlled for age, gender and mood (Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012)

### **5.2.2 Measures**

The measures used in this study have already been detailed in Chapter 4.3.1.1. They are summarised again below alongside details of achieved internal consistency where relevant.

#### **5.2.2.1 Demographic Variables and Potential Confounders.**

*Demographic characteristics.* The demographic details collected included age and gender information.

*Mood.* The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) measured symptoms and severity of anxiety and depression. Cronbach's  $\alpha$  in this study was .75 for the anxiety subscale, and  $\alpha = .65$  for the depression subscale.

### 5.2.2.2 Self-Harm and Suicidal Ideation or Behaviours.

*Self-harm.* Self-harm behaviours were measured using the CASE Study questionnaire (Hawton et al., 2006) item, “*Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*” Participants responding ‘Yes, once’ or ‘Yes, more than once’ comprised the “Enactment” group.

*Self-harm/suicidal ideation.* Ideation was measured using the item, “*Have you, during the past month or the past year, seriously thought about taking an overdose or trying to harm yourself but not actually done so?*” Those responding ‘Yes’ (either in the past month, or over a month but less than a year ago) and ‘No’ to the question on self-harm behaviours comprised the “Ideation” group. Individuals who responded “No” to both questions were considered “Controls” with no history of SSHTBs.

### 5.2.2.3 Pre-Motivational & Volitional Phase Variables.

*Bereavement.* Bereavement experiences were established from three items of the Life Events Checklist (LEC) of the CASE Study (Hawton et al., 2006): “*Has anyone among your immediate family (mother, father, brother, or sister) died?*”, “*Has anyone close to you died?*”, and “*Has anyone among your family or friends committed suicide?*”

A composite variable was then created to indicate experiences of any bereavement among participants. A further breakdown of this variable distinguished whether bereavements were by suicide or non-suicide, for separate analyses. Participants responding ‘Yes’ to a suicide of family or friends were considered to be suicide-bereaved; those responding ‘Yes’ to the death of an immediate family member or anyone close but ‘No’ to a suicide death were considered non-suicide bereaved.

### **5.2.3 Procedure**

The research was approved by the University of Stirling Psychology Department ethics committee. Passive parental consent procedures were used, and teachers were informed about the nature of the study approximately two or three weeks prior to the study date. On the day of the study, pupils were invited to complete an anonymous self-report questionnaire which took approximately 30 minutes. All participants were provided with blank sealable envelopes to return their completed forms to the researchers and were also given an information sheet containing details of follow-up resources to take away with them (O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009).

### **5.2.4 Data Analysis**

#### **5.2.4.1 Missing Data.**

A Missing Value Analysis (MVA) was carried out to assess the extent and patterns of missing data. This analysis found that 0.14% of values, 1.84% of cases, and 30% of variables contained incomplete data. No individual items contained over 10% missing data, which would be considered an acceptable level of missingness (Dong & Peng, 2013); the largest amount of missing data were present in the LEC death items, with each reporting 12 (0.6%) incomplete values. Little's MCAR test was significant,  $\chi^2(14) = 49.89, p < .001$ , suggesting the data are missing not at random. However, given the negligible amount of missing data, and that the majority of variables under analysis cannot be dealt with using adjustments or imputation procedures (e.g., demographic variables, experiences of bereavement, and self-

harm), pairwise deletion was used in place of alternative methods of dealing with missing data.<sup>4</sup>

#### 5.2.4.2 Planned Analyses.

The sample was described, and descriptive statistics were used to report the prevalence of bereavement (Aim 1) as well as self-harm (Aim 2). As mentioned in Chapter 4.3.1.2, two separate hierarchical multinomial logistic regressions were used to address Aim 3 (representing the pre-motivational and volitional phases of the IMV model). These investigated whether predictor variables were associated with one of three possible self-harm outcomes: enactment, ideation, or controls. Predictors entered in each of the models were:

- a.) Pre-motivational phase: bereavement status (bereaved vs non-bereaved)
- b.) Volitional phase: cause of bereavement (suicide vs non-suicide)

Variables were entered individually into univariate regressions; one with the control group as the reference category, and another with the self-harm ideation group as the reference category. Multivariate models were to be used when several variables were significant univariate predictors within a model phase test (in this case, only applicable to the volitional phase test which had two predictors), to determine their relative contributions. Holm-Bonferroni corrections were applied to correct for multiple comparisons throughout.

Demographic variables (age and gender) were controlled for in all analyses, owing to established differences with respect to self-harm (Hawton, Saunders, et al., 2012). Anxiety and depression were also controlled for due to their associations with self-harm (Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009) and bereavement (Berg et al., 2016;

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<sup>4</sup> The removal of these cases had minimal impact on the demographic distribution of the sample. The age range, mean, and *SD* remained unchanged from the full sample of  $n = 2008$ , and the number of males, females, and individuals who did not provide this information changed marginally to 927, 1063, and 3 individuals, respectively.

Bolton et al., 2016; Kaplow et al., 2010), and in line with previous studies in this area (e.g., Dhingra et al., 2015; Hasking et al., 2013; O'Connor et al., 2012). All analyses were carried out using SPSS Version 25.

### **5.3 Results**

Across the entire sample, mean depression ( $M = 17.0$ ,  $SD = 3.1$ , range = 0-21) and anxiety ( $M = 12.9$ ,  $SD = 3.9$ , range = 0-21) scores were higher than the recommended cut-offs to indicate clinical concern (7 and 9, respectively). The regression analyses conducted to address Aim 3 thus controlled for both depression and anxiety.

#### **5.3.1 Aim 1. Prevalence of Bereavement**

A total of 222 (11.06%) adolescents reported being bereaved of an immediate family member, and 1227 (61.11%) reported being bereaved of someone else close. The total number who responded yes to *either* of these deaths was 1286 (64.04%).

A further 159 (7.92%) people stated that someone among their family or friends had died by suicide. Altogether, the combined number of young people who reported any bereavement by any cause was 1314 (65.44%), with the remaining 686 (34.16%) individuals being non-bereaved.

By grouping those who had been bereaved of an immediate family and/or someone else close, but not bereaved by suicide, this equated to 1155 (57.52%) individuals. This constituted the non-suicide bereaved group, which was used as a predictor alongside the suicide-bereaved group ( $n = 159$ ) in subsequent analyses.

### 5.3.2 Aim 2. Prevalence of Self-Harm

A total of 272 (13.55%) pupils reported having ever engaged in self-harm during their lifetime (enactment group), while a further 129 (6.42%) reported experiencing self-harm ideation without acting on it. The control group therefore consisted of 1597 (79.53%) individuals with no history of self-harm acts or thoughts.

A breakdown of the three bereaved groups (non-bereaved, bereaved by non-suicide, and bereaved by suicide) across the self-harm categories is shown in Table 5.1.

**Table 5.1**

#### *Prevalence of Bereavement Across Self-Harm Groups*

	Controls	Ideation	Enactment	Total
	( <i>n</i> , %)	( <i>n</i> , %)	( <i>n</i> , %)	( <i>n</i> , %)
Non-Bereaved	575 (28.64%)	38 (1.89%)	69 (3.44%)	682 (33.96%)
Bereaved	1017 (50.65%)	91 (4.53%)	203 (10.11%)	1311 (65.29%)
	<i>(NSB: 925,</i>	<i>(NSB: 76,</i>	<i>(NSB: 151,</i>	<i>(NSB: 1152,</i>
	<i>46.07%;</i>	<i>3.78%;</i>	<i>7.52%;</i>	<i>57.37%;</i>
	<i>SB: 92, 4.58%)</i>	<i>SB: 15, 0.75%)</i>	<i>SB: 52, 2.59%)</i>	<i>SB: 159, 7.92%)</i>
Total	1592 (79.28%)	129 (6.42%)	272 (13.55%)	1993 (99.25%)

*Note.* Due to missing data, the sample size varies from the full dataset. NSB = Non-suicide bereaved; SB = Suicide bereaved. Italicised text shows breakdown of different bereaved groups.

### 5.3.3 Aim 3. IMV Model Tests

a.) Associations between pre-motivational phase variable and self-harm

A hierarchical multinomial logistic regression examined whether the pre-motivational phase variable of bereavement (yes/no) was associated with life-time self-harm group (Table 5.2), controlling for age, gender, and mood. Results showed that this was not significant,

range of  $p$  across the individual comparisons was .051-.515. Bereavement did not differentiate between control, ideation, and enactment groups.

**Table 5.2**

*Univariate Multinomial Logistic Regression of the Association Between Bereavement (Pre-Motivational Phase Variable) and Self-Harm Status (Controlling for Age, Gender, and Mood)*

Pre-Motivational Phase Variable	B	SE	OR	95% CI for Odds Ratio	$p$	
<b>Bereavement</b>						
Control	Ideation	-0.14	0.21	0.87	0.58 - 1.31	.515
Control	Enactment	-0.32	0.16	0.73	0.53 - 1.00	.051
Ideation	Enactment	-0.18	0.24	0.84	0.52 - 1.34	.453

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level, of which there were none in this analysis. The first column indicates the reference category.

b.) Associations between volitional phase variables and self-harm

A hierarchical multinomial logistic regression examined whether specific causes of death were associated with self-harm group, examining suicide and non-suicide bereavements as independent predictors. As hypothesised, univariate tests showed that suicide bereavement was a significant independent variable, with those in the enactment group more likely to report this experience than controls (Table 5.3), and non-suicide bereavement was not significant. A multivariate analysis was not required given that only one variable emerged as significant at this stage.

**Table 5.3**

*Univariate Multinomial Logistic Regression of the Association Between Suicide and Non-suicide Bereavement (Volitional Phase Variables) and Self-Harm Status (Controlling for Age, Gender, and Mood)*

Pre-Motivational Phase Variable		B	SE	OR	95% CI for Odds Ratio	p
<b>Suicide Death</b>						
Control	Ideation	-0.63	0.32	0.54	0.29 - 1.00	.049
Control	Enactment	-1.26	0.22	0.29	0.19 - 0.44	<b>&lt;.001</b>
Ideation	Enactment	-0.63	0.33	0.53	0.28 - 1.01	.055
<b>Non-Suicide Death</b>						
Control	Ideation	0.06	0.19	1.06	0.73 - 1.55	.761
Control	Enactment	0.24	0.15	1.27	0.95 - 1.68	.106
Ideation	Enactment	0.18	0.22	1.19	0.78 - 1.84	.422

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category.

## 5.4 Discussion

This study aimed to quantify the rates of bereavement and self-harm among young people in a large representative sample of Scottish adolescents. It further aimed to determine whether bereavement and specific causes of death were associated with self-harm ideation or enactment, as predicted by the IMV model. Within the pre-motivational phase test of the theory, it was expected that ideation and enactment groups would differ from controls, but not each other, on the experience of any bereavement. Further, bereavement by suicide, but not non-suicide deaths, was expected to differentiate ideation and enactment groups from each other and from controls, within a test of the volitional phase.

Contrary to the first hypothesis, bereavement status did not differentiate the three groups. However, the volitional phase test of the model found evidence that suicide bereavement, but not non-suicide bereavement experiences, differentiated groups. Specifically, young people who engaged in self-harm were more likely than those with no history of ideation or enactment to report a past suicide loss. Each of these findings are discussed in turn below, followed by a discussion of the strengths and limitations of this chapter, as well as directions for future research.

#### ***5.4.1 Rates of Bereavement Among Scottish Adolescents***

This study provides important evidence that bereavement is common among Scottish adolescents, with 65.44% reporting exposure to any death, and a fairly large proportion having lost a family member or friend to suicide (7.92%). This is consistent with findings by Paul and Vaswani (2020), who reported that 50.8% of 8 year olds in a Scottish sample had been bereaved of a parent, sibling, grandparent, or other close relative, increasing to 62% two years later. The prevalence of bereavement overall was slightly lower than in Harrison and Harrington's study (2001), which reported 77.6% of adolescents aged 11-16 bereaved of a first or second-degree relative or close friend. Parsons (2011) looked only at parental deaths (5%), so the rate of immediate family deaths in this study (11.06%) is expectedly higher. However, this prevalence rate is considerably greater than that reported by Fauth et al. (2009), where only 3.5% of children and adolescents were found to be bereaved of a parent or sibling. Fauth and colleagues analysed data from 5-16 year olds, and therefore results may not be directly comparable here, given the lower age range in their study. Although no known research has compared rates of bereavement among children and adolescent groups within the same study (e.g., Andriessen, Rahman, et al., 2017 compares only adolescents and adults), younger children will presumably have had less life experience and therefore fewer chances

to be exposed to deaths, possibly explaining the lower prevalence of bereavement in Fauth et al.'s study. A large proportion of young people reported a suicide death of a friend or family member. This finding is somewhat consistent with Andriessen et al., (2017) who found that 21.83% of young people in the general community were exposed at some point in their lives to a suicide. Overall, this analysis provided valuable evidence in terms of the prevalence of young people who have lost a loved one to suicide or other causes.

#### ***5.4.2 Association Between Bereavement and Self-Harm***

Contrary to the pre-motivational phase hypothesis, bereavement status did not differentiate the three self-harm groups. This finding contradicts previous research showing an association between bereavement and SSHTBs (Guldin et al., 2015; Jakobsen & Christiansen, 2011; University of Manchester, 2017). One possible explanation is the way in which bereavement experiences were ascertained in this study. Death-related items asked about the loss of an immediate family member, someone close, or the suicide of a friend family member, and responses were limited to tick marks of whether and when they experienced this. It is not possible to determine how young people interpreted these questions. Individuals may have experienced the death of somebody not fitting into these categories (e.g., an estranged family member, a complicated relationship, an acquaintance), and therefore not responded to this question as expected.

In addition, the LEC items do not provide an indication of the severity of grief reactions. Some people may have felt deeply affected by a death, possibly experiencing symptoms of prolonged grief, while others experienced little or no impact. Cerel et al. (2014) proposed a continuum of suicide bereavement, which acknowledges the varying degrees of emotional attachment and adjustment following a suicide loss (from exposed, affected, or bereaved in the short or long-term). Although individuals were coded as suicide bereaved if

they answered yes to experiencing a suicide death, it has been said that simply being exposed to a suicide death does not constitute someone being deeply affected by it (Andriessen, Kryszynska, et al., 2017). The concept of exposure in relation to suicide bereavement, and bereavement generally, is complex and continues to be the subject of considerable debate, but relates to whether the loss needs to constitute a life-changing event (Andriessen, 2009), cause significant distress over a prolonged period (Jordan & McIntosh, 2011), or specify levels of kinship or psychological closeness (Berman, 2011). Further information on the impact of the death was not ascertainable from these data. In addition, due to the way the questions were posed, it was also not possible to ascertain if pupils were bereaved by multiple deaths, thus these issues warrant further exploration.

Considering the limited number of variables investigated here, further comment cannot be made on how other factors influence the relationship between bereavement and self-harm within the pre-motivational phase of the IMV model. The model proposes that individual vulnerabilities combined with life stressors form the basis for developing suicide or self-harm ideation (O'Connor, 2011; O'Connor & Kirtley, 2018). Experiences of early life adversity are linked with increased risk for self-harm or suicide, such as being bullied, physical or sexual abuse, or parental separation or divorce (Hawton, Saunders, et al., 2012), but were not considered in this secondary analysis as they were not available from the original sample. As evidence suggests a dose-response effect with negative life events and SSHTBs (Serafini et al., 2015), future work should consider the role of accumulated life adversities in testing the pre-motivational phase of the model.

The findings in relation to the IMV Model show that suicide-bereavement was associated with self-harm outcome (and as predicted, non-suicide bereavement was not). This provides support for its placement as a volitional phase variable in the IMV model. This finding is consistent with past evidence that suicide bereavement is associated with SSHTBs

(Cheng et al., 2014; Guldin et al., 2015; Kuramoto et al., 2013; Madge et al., 2011; Wilcox et al., 2010). On the other hand, in a nationally representative sample of 3,508 young adults aged 18-34 years there was no association between having a family member or friend die by suicide, and subsequent suicidal ideation or attempts (Wetherall et al., 2018). The researchers in this study did, however, find an association between exposure to non-fatal suicide attempts of a friend (but not of family) and own suicide attempts. Wetherall et al. used the same items from the Life Events Checklist of the CASE Study questionnaire (Hawton et al., 2006) to assess suicide exposure, and employed similar statistical approaches. However, they used an older age group than the present study, which may account for the divergent findings; the current study thus provides a novel contribution to the literature by testing these associations with a younger age group. Specifically, there are a number of potential mechanisms suggested to explain the relationship between suicide bereavement and self-harm (as discussed in Chapter 2.4), and some may be particularly relevant to adolescents as compared to young adults. Research suggests that within families, shared environmental stressors, genetic factors, or transmission of psychopathology and impulsive aggression (Brent et al., 2002; Melhem et al., 2007; Pitman et al., 2014) may account for the transmission of suicidal behaviours. Social learning, modelling, or imitation (De Leo & Heller, 2008; Quigley et al., 2017a), as well as assortative mating or relating (Pitman et al., 2014), may play an important role in the transmission of suicidal behaviour among peers as well as family. Adolescents may be particularly susceptible to peer influences in relation to delinquency, an effect which decreases with age into adulthood (Jarvi et al., 2013). Studies of suicide clusters (where excessive suicides occur closely in time or space) also suggest clustering of attempted suicide occurs only in younger age groups (15-19 and 20-24 years), compared to older adults up to 75+ years (Gould et al., 1994). It is therefore possible that the older sample in Wetherall et

al.'s study explains the dissimilar findings in relation to this variable, and thus adolescent age groups may be more susceptible to the effects of suicide bereavement than older individuals.

#### ***5.4.3 Strengths and Limitations***

A key strength of this study was its grounding in theory. The IMV model makes specific predictions about the role of individual variables, which, if supported, can direct future research and practice in relation to addressing suicide. Bereavement experiences were examined within two phases of the model, and the findings of this study add to the growing body of work testing the validity of the theoretical model.

Another major strength of the study was the completeness of the data, with only a small proportion of missing data, and a large sample size sufficient to support the analytical approaches chosen. Secondary datasets can be useful to investigate behaviours which have a low prevalence in the general population, such as suicide or self-harm (Russell & Matthews, 2011), making such analyses possible. The sample obtained here was also representative of the wider population of young people, allowing results to be generalised to similar adolescents in Scotland.

Despite the strengths of this study, a key limitation was the lack of control over the design and methods, being a secondary data analysis. The data were collected before the development of the IMV Model. Therefore, while basic information surrounding bereavement experiences was available, information about other constructs which are relevant to bereavement experiences, and to testing the IMV model more broadly, were not. For instance, key variables in the central phase of the model, namely defeat and entrapment, are thought to be necessary for the emergence of suicidal thinking (O'Connor, 2011; O'Connor & Kirtley, 2018). Variables which moderate these pathways, such as one's coping style (Bartik et al., 2013b; Gooding et al., 2015), levels of self-esteem (Brent et al., 2009;

Gooding et al., 2015; Seguin et al., 2004), availability of social support (Andriessen et al., 2015; Kleiman & Liu, 2013; O'Connor & Nock, 2014), and attitudes toward suicide (Bartik et al., 2015) are also thought to be important in the development of SSHTBs, as well as to bereavement outcomes. These variables require further investigation in studies with bereaved young people.

In addition, the data surrounding bereavements were limited, and future bereavement studies should consider factors such as the perceived closeness and quality of the relationship, kinship relation, and surprise at the death, for example (Andriessen et al., 2016; Feigelman et al., 2009; Pitman et al., 2016a). A broader set of variables would therefore allow for the testing of the IMV model as a whole, rather than separate component parts as in the current study.

As this study is based only on the cross-sectional data of a wider (longitudinal) study, information about causality and directionality could not be inferred here. Prospective research is crucial to understanding which factors may predict self-harm, and longitudinal work is lacking in this field. Finally, the inherent limitations of self-report measures, including recall bias and socially desirable responding, must be acknowledged. While the measures used in this study have established psychometric properties, the HADS subscales of anxiety and depression demonstrated lower reliability than in the published literature. This was particularly the case for the depression subscale, and the mean scores for both subscales were higher than the recommended cut-offs by White et al. (1999). Reasons for this are unclear but may reflect issues with the representativeness of the sample or data input.

#### ***5.4.4 Implications***

This study fills an important gap in the literature on the prevalence of adolescent bereavement by different causes in Scotland. It also provides evidence of an association

between exposure to suicide deaths of a family or friend and subsequent self-harm, as implicated in the theoretical model underpinning this research. Theory-based work is critical to understanding the complex relationships between factors associated with self-harm, and research testing the emerging model is needed to help further revise and refine the theory. This is important for the development of interventions to reduce self-harm. For instance, these findings suggest a benefit to screening for experiences of suicide bereavement, to assist in early identification of individuals at risk for SSHTBs.

While this study provides valuable information regarding bereavement experiences among Scottish youth, several uncertainties remain. Additional research is needed to test multiple components of the model simultaneously and examine the role of other key variables within the phases of the IMV model. In particular, cumulative adverse life events warrant further investigation in testing the pre-motivational phase. The constructs of defeat, entrapment, coping, self-esteem, social support, and attitudes toward suicide (as described in Chapter 4) may be particularly relevant in the development of self-harm ideation within the motivational phase, as well as to adjustment after a death. Importantly, research is needed to look more closely at details surrounding bereavement experiences to understand the wider impact and context of loss. Finally, there is a lack of prospective studies testing the IMV Model, and within suicide research more generally (O'Connor & Kirtley, 2018), which can be useful in the attempt to predict (and ultimately prevent) future suicides.

#### ***5.4.5 Chapter Summary***

##### **Key points for this chapter:**

- A secondary analysis of cross-sectional data from a schools-based study found that almost 8% of adolescents reported knowing someone who had died by suicide, and a further 58% had reported a non-suicide death.

- Rates of self-harm among the sample were comparable to other studies with Scottish adolescents: 14% of the sample reported previous self-harm behaviours, and 6% self-harm ideation.
- Experiences of suicide loss were significantly associated with self-harm group membership, where those with a history of self-harm behaviours were more likely to report exposure to previous suicides than controls. Bereavement status more generally, and experiencing a non-suicide death, did not predict outcomes.
- Longitudinal relationships, as well as circumstances surrounding the bereavement and other variables could not be explored due to limited data available from the secondary dataset.

**Questions for the subsequent chapter:**

- Given that longitudinal associations were not testable from this dataset, what is the relationship between bereavement experiences and SSHTBs prospectively?
- What role do established psychosocial variables highlighted in the IMV model and the wider bereavement literature, such as coping, social support, and attitudes, play in the development of SSHTBs?

**Next steps:**

- Chapter 6 presents Study 2, a schools-based study investigating prospective predictors of self-harm ideation and enactment. Designed as a direct test of the IMV model, it explores a wide range of relevant risk and protective factors thought to be important in bereavement and self-harm outcomes among youth.

## **Chapter 6 Study 2: Exploring Longitudinal Predictors of Self-Harm Ideation and Enactment Among Adolescents with and Without Bereavement Experiences**

The study presented in this chapter has been published in *Frontiers in Psychology* (del Carpio et al., 2020). This publication is an open access article, licensed under a Creative Commons CC BY license. This signifies that any part of the article can be used, distributed, and reproduced in any medium without permission, providing that the author(s) and original source are clearly cited (Creative Commons, 2022; Frontiers, 2022). A copy of the published article can be accessed at: <https://doi.org/10.3389/fpsyg.2020.01153>.<sup>5</sup>

The current chapter presents a modified version of the published paper, which includes additional information relevant to this PhD. This includes further details on the data collection and analytical approach, a discussion of an additional bereavement measure employed, and additional analyses testing the IMV pre-motivational phase and defeat and entrapment as outcome measures, which are not provided in the published material. Unlike the published article, this chapter concludes with a discussion of the remaining questions to be addressed in the final empirical study of this thesis.

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<sup>5</sup> Please note that a corrigendum has been published to this paper, due to a data processing error which was regrettably caused whilst combining participant data across the two timepoints. This led to a proportion of the baseline data being incorrectly matched to incorrect follow-up data. Upon rerunning the analysis with the corrected dataset, the main results and conclusions of the paper remained unaffected, although the specific descriptive and inferential statistics changed slightly as a result of the correct matching, and a small number of variables reached statistical significance. The corrected results are presented in the journal and in this chapter.

## **Abstract**

### **Background**

Research suggests that bereavement, and specifically exposure to suicide deaths, can lead to increased vulnerability for self-harm. Ideation to action models of suicide, such as the IMV model, recognise exposure to suicide as a significant risk factor in the translation of thoughts into actions. Yet, there is limited research which tests this link explicitly with adolescents, tests whether this risk persists over time, and examines how it compares to other bereavements. This study builds on findings from Chapter 5 and explores the prospective relationship between bereavement and self-harm, within the context of theory.

### **Methods**

A 6-month prospective study was conducted with 185 adolescents aged 11 to 17 (115 individuals were followed-up at Time 2). A self-report questionnaire was used to gather information on experiences with bereavement and lifetime engagement in self-harm or self-harm ideation, as well as measures of life events, defeat, entrapment, social support, coping, and other psychological and social variables.

### **Results**

Analyses looked at cross-sectional as well as longitudinal associations. At baseline, 11% of young people reported exposure to a suicide death, and 62% to a non-suicide death, while on a separate measure, 79% reported being bereaved by someone important to them. In addition, 21% of pupils reported lifetime engagement in self-harm, and a further 24% had experienced self-harm ideation without engaging in it. Cross-sectional multinomial logistic regressions showed that: negative life events, maladaptive coping, family social support, endorsing glorifying/normalising beliefs about suicide, and exposure to family self-harm were significantly associated with self-harm group membership (control, ideation, or enactment groups) at baseline, all in the expected directions.

At follow-up, 9% of pupils reported exposure to a suicide death and 11% to a non-suicide death for the first time, and on a separate measure, 8% reported a new bereavement of someone important by Time 2. In addition, 29% of participants reported lifetime self-harm (8% for the first time over the course of the study), and 23% reported self-harm ideation only at Time 2. Multivariate analyses found that stigmatising beliefs about suicide, glorifying/normalising beliefs about suicide, and self-harm ideation at baseline predicted self-harm group membership prospectively, such that: those who reported Time 2 self-harm enactment were less likely to hold stigmatising or glorifying/normalising beliefs and more likely to report self-harm ideation at baseline compared to controls, and those who reported Time 2 self-harm ideation were less likely to report glorifying/normalising beliefs and more likely to report self-harm ideation at baseline than controls. Bereavement status did not predict self-harm or levels of defeat or entrapment at baseline nor at follow-up.

## **Conclusions**

This study provides important information regarding rates of bereavement in Scotland, and offers some evidence for the validity of the IMV model, although predictive ability over 6-months period was limited. Findings are discussed in relation to previous research, with consideration of the challenges with recruitment that resulted in a small sample and limited statistical power. Despite the limitations, this study provides novel insight into the experiences of bereavement among Scottish adolescents and the risk factors for the onset and maintenance of self-harm, which are critical for informing future interventions to reduce self-harm.

## **6.1 Introduction**

The secondary analysis of data collected from pupils in Scottish secondary schools (Chapter 5) showed that bereavement is a common experience among adolescents, and

likewise, many young people have engaged in suicidal or self-harming thoughts and behaviours (SSHTBs) during their lifetime. Furthermore, those who had been exposed to previous suicides were significantly more likely to report a history of self-harm behaviours than controls, but bereavement status more generally was not associated with self-harm outcomes.

Although the association between bereavement by, or exposure to, suicide and subsequent SSHTBs has been explored previously (see Chapter 3), questions remain about this relationship. Firstly, while family suicides appear to be linked with future self-harm among adolescents (Cheng et al., 2014; Guldin et al., 2015; Kuramoto et al., 2013; Qin et al., 2002; Wilcox et al., 2010), there is a lack of research examining non-familial suicides. Cross-sectional research of the impact of suicide out with the family (e.g., Pirelli & Jeglic, 2009) indicates a possible association with future self-harm, although longitudinal research using control groups is sparse (Andriessen et al., 2016). Furthermore, research to date lacks theoretical grounding which would help map the complexity of factors contributing to risk, and consequently inform suicide intervention development going forward.

While Chapter 5 investigated the link between exposure to suicide or other deaths and self-harm, several additional variables relevant in this relationship were not testable from the secondary analysis dataset. Further research is needed to investigate the role of other constructs (listed in Table 6.1), according to their suggested positions within the IMV model.

**Table 6.1**

*Variables Purportedly Important in Understanding the Impact of Bereavement According to Their Position Within the IMV Model*

<b>Pre-Motivational Phase</b>	<b>Motivational Phase</b>	<b>Volitional Phase</b>
Any bereavement	Defeat	Cause of bereavement (suicide vs non-suicide) (VM)
Negative life events	Entrapment	Self-harm in family (VM)
	Suicidal ideation	Self-harm in friends (VM)
	Coping (TSM)	
	Self-esteem (TSM)	
	Social support (MM)	
	Attitudes towards suicide (MM)	

*Note.* TSM = Threat to Self Moderator. MM = Motivational Moderator. VM = Volitional Moderator.

To build on the findings from Study 5, additional research is necessary which quantifies the number of adolescents bereaved by suicide, and understands how this experience is affected by other personal and social factors, such as self-esteem or social support. No known studies have looked at the direct link between suicide bereavement and defeat and entrapment, which are key predictors of suicidal ideation. Thus, research on key concepts within the IMV model may help clarify why experiences of losing a family member or friend to suicide lead to greater risk of self-harm or suicidal behaviours in some people. Longitudinal research is also vital as the majority of studies (including Study 1) have been cross-sectional, limiting conclusions on cause-and-effect relationships.

### **6.1.1 Study Aims and Hypotheses**

The current study therefore aims to explore whether exposure to deaths (by suicide or other causes) is associated with SSHTBs cross-sectionally and longitudinally over a 6-month follow up, and to examine the role of established psychosocial factors implicated in this relationship. Factors highlighted in the wider literature as being relevant to the emergence of suicidal or self-harming behaviours among adolescents were examined, within the context of the IMV model. In order to address Research Questions 1-4 (see Chapter 3.4.6), four specific aims for this study were identified as follows:

1. Determine the prevalence of all cause bereavement, and bereavement specifically by suicide, among a sample of adolescents in Scotland at baseline, and incidence over a 6-month period.
2. Determine the prevalence of self-harm ideation and enactment among adolescents at baseline, and incidence over a 6-month period.
3. Explore whether bereavement experiences and relevant psychosocial variables predict SSHTBs at baseline and over a 6-month period.

Adolescents will be grouped into one of three categories depending on their experiences with SSHTBs: controls (reporting no history of self-harm thoughts or actions), ideation (reporting self-harm ideation but no actions), and enactment (reporting self-harm behaviours) groups.

Specifically, to address Aim 3, based on predictions from the IMV model, it is hypothesised that:

- a.) Ideation and enactment groups will differ from controls, but not each other, on pre-motivational phase measures (bereavement, and negative life events).
- b.) Ideation and enactment groups will differ from controls, but not each other, on motivational phase measures (defeat, entrapment, social support, coping, self-esteem, and attitudes to suicide).

- c.) Ideation and enactment groups will differ from controls, as well as each other, on volitional phase measures (exposure to suicide deaths, family self-harm, and friend self-harm). Exposure to non-suicide deaths will not differentiate groups (control, ideation, or enactment).
4. Explore whether bereavement experiences, as a pre-motivational phase variable, predict levels of defeat and entrapment at baseline and 6 months later.

No known studies have tested whether bereavement experiences predict levels of defeat and entrapment, but given the key role of defeat and entrapment in the development of self-harm or suicidal ideation, an exploratory analysis was conducted investigating this relationship.

Based on the IMV model, it is expected that:

- a.) Experiences of bereavement will be an independent predictor of defeat, with those reporting a bereavement having higher levels of defeat.
- b.) Experiences of bereavement will be an independent predictor of entrapment, with those reporting a bereavement having higher levels of entrapment.

## **6.2 Method**

### **6.2.1 Participants**

Secondary school pupils across all year groups (S1 to S6) were invited to take part at baseline (T1) and were followed up 6 months later (T2). The aim was to recruit at least 500 individuals, which was determined based on reviewing previous studies in the field which recruited between 500-3000 participants to allow prospective examination of self-harm behaviour following a bereavement (see Section 6.2.3 for details of the recruitment process).

The sample at T1 consisted of a total of 185 pupils (aged 11-17,  $M = 13.2$ ,  $SD = 1.5$ ), recruited from nine secondary schools across Scotland. This sample consisted of individuals retained after removing participants with over 50% missing data throughout their responses

( $n = 2$ ), and who did not provide data on any of the outcome measures relating to self-harm ( $n = 22$ ). In addition, some participants were included as T1 data gathered at T2, as these individuals only provided data once at the time of follow-up (i.e., they were absent at the first time point, or their baseline data had been removed due to missingness but their T2 questionnaire was complete;  $n = 15$ ). As a result, the final baseline sample consisted of  $n = 185$ .

Of the T1 sample, 85 stated they were male, 97 female, 2 other, and 1 did not provide this information. Approximately half were in Year 1 of secondary school ( $n = 91$ , 49.2%), predominantly aged 12-13 years old, and described their ethnicity as White ( $n = 164$ , 88.65%), consistent with the last Scottish Census (96.1%; National Records of Scotland, 2011). The percentage of pupils within schools entitled to free school meals, as a proxy measure of SES, ranged from 4.74% to 20.99% ( $M = 14.3$ ,  $SD = 5.2$ ), slightly lower than previous Scottish studies (e.g., mean of 17.8% in Russell et al., 2018), though comparable to the national average of 14.4% (Scottish Government, 2018a).

Males ( $M = 13.1$  years,  $SD = 1.5$ ) did not differ significantly from females ( $M = 13.2$  years,  $SD = 1.5$ ) in terms of age,  $t(180) = -.82$ ,  $p = .414$ ; SES,  $t(180) = .26$ ,  $p = .792$ ; ethnicity,  $\chi^2(1, n = 180) = 2.38$ ,  $p = .123$ ; or year group,  $\chi^2(1, n = 178) = .32$ ,  $p = .570$ . With regards to the questionnaire measures at baseline, there were no significant gender differences in: whether or not participants were bereaved (using the bereavement scale item or the LEC measure), glorification/normalisation subscale of the SOSS, adaptive coping, and social support (family, friends, or significant other subscales). There were, however, significant differences between males and females in self-reported: lifetime self-harm enactment, lifetime self-harm ideation (note: no significant difference was found in self-harm thoughts but a significant difference was found in suicidal thoughts; the self-harm ideation variable combines these two responses), depression, anxiety, defeat, entrapment, self-esteem,

SOSS stigmatisation, SOSS isolation/depression, maladaptive coping, and total number of negative life events. In all cases apart from SOSS stigmatisation, females indicated more symptoms, negative experiences or higher distress than males (T-test and chi-square results of these comparisons are presented in Appendix M). As a result of the significant gender differences across several scales in this study, and consistent with the wider literature (e.g., Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012), statistical analyses controlled for gender (as well as age, depression, and anxiety).

At T2, 115 individuals (aged 12-18,  $M = 13.7$ ,  $SD = 1.5$ ; 46 male, 67 female, and 2 other) provided data which could be successfully matched to corresponding baseline data. This sample was retained after removing data from respondents: who had over 50% missing data ( $n = 3$ ), who did not respond to any of the outcome measures ( $n = 5$ ), whose data were included as baseline data as they had no T1 data (as a result of high rates of missingness or absenteeism at T1, as described above;  $n = 15$ ), and whose T2 participant identifier codes could not be confidently matched to their baseline data ( $n = 31$ ). Codes were considered successfully matched if they corresponded exactly with a code at baseline from the same school, or on a majority of the code components. Where there was any doubt, caution was taken and the match was deemed not successful, and follow-up data disregarded.

Consequently, a total of 115 participants were retained as the follow-up sample. The retention rate of 62.16% is similar to other longitudinal studies using adolescent samples (Boergers & Spirinto, 2003; Hasking et al., 2013; Hasking et al., 2015; O'Connor, Rasmussen, et al., 2009a; Rasmussen et al., 2016).

In the T2 sample, 46 (40%) pupils reported their gender as male and 67 (58.26%) female; and two participants (1.74%) responded "Other". The majority at follow-up were in Year 2 of secondary school ( $n = 65$ , 56.52%) and described their ethnicity as White ( $n = 107$ , 93.04%).

## **6.2.2 Measures**

The measures used in this study have already been detailed in Chapter 4.3.2.2, and a copy of the questionnaire is included in Appendix A. They are summarised again below alongside details of achieved internal consistency metrics where relevant.

### **6.2.2.1 Demographic Variables and Potential Confounders.**

*Demographic characteristics.* The demographic details collected included age and gender, which were controlled for in all analyses due to their potential confounding, and ethnicity and socioeconomic status (SES) based on the proportion of pupils in the school entitled to free school meals (Scottish Government, 2018a). Though this rate was requested and obtained directly from each school, it was noted that proportions were reported at different times of the academic year and with varying degrees of specificity, thus government statistics were used for consistency. The correlation between schools' reported proportions and government statistics was very high,  $r = .977$ ,  $p < .001$ .

*Depression.* Depression symptoms were assessed using the Short Mood and Feelings Questionnaire (SMFQ; Angold et al., 1995). Cronbach's  $\alpha$  in this study was .93, similar to that in the published literature (e.g.,  $\alpha = .85$  in Angold et al., 1995).

*Anxiety.* The Generalised Anxiety Disorder (GAD-7; Spitzer et al., 2006) scale measured symptoms of anxiety. Cronbach's  $\alpha$  was .92, consistent with other studies in the field (e.g.,  $\alpha = .92$ ; Spitzer et al., 2006).

### **6.2.2.2 Self-Harm and Suicidal Ideation or Behaviours.**

*Self-harm.* Self-harm was measured using five items from the Child and Adolescent Self-Harm in Europe (CASE) study questionnaire (Hawton et al., 2006), including, "Have

*you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*” The “Enactment” group consisted of those responding ‘Yes, once’ or ‘Yes, more than once’. Further questions were asked from this group about the timing of their first episode of self-harm, the most recent episode, what they did to themselves on the last occasion, and possible motives (all items from the CASE Study questionnaire). A question created for this study was added regarding the timing of self-harm in relation to any possible bereavements.

*Self-harm ideation.* Non-suicidal self-injury (NSSI) thoughts were assessed using the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock et al., 2007) item, “*Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)*”. Suicidal thoughts were assessed with the SITBI item, “*Have you ever had thoughts of killing yourself?*” Both questions were followed by a question created for this study asking about the timing of the thoughts in relation to any bereavements. A participant who answered ‘Yes’ to either NSSI or suicidal thoughts and ‘No’ to self-harm behaviours was considered to be in the “Ideation” group. Thus, this group consisted of all individuals with previous thoughts of self-harm or suicide, irrespective of their intent or motivation (similar to the Enactment group with regards to the intent or motivation of their behaviours). Individuals responding “No” to previous self-harm behaviours and to both ideation questions were considered “Controls” with no history of self-harm thoughts or acts.

### **6.2.2.3 Pre-Motivational Phase Variables.**

*Bereavement.* Questions created for this study measured bereavement experiences, based on existing literature in this area (e.g., Andriessen et al., 2016; Feigelman et al., 2009; Pitman et al., 2016a). Participants were asked, “*Have you experienced the death of someone important to you during your lifetime, such as a friend or family member?*” Those who had

were presented with further questions regarding the individual's death, including: the person's relationship to them, cause of death (natural expected death, natural unexpected/sudden death, accident, suicide, murder/homicide, don't know, or other), perceived closeness and quality of the relationship, surprise about the death, time since the death, age of the person who died as well as of the participant at the time of the death, how long they knew the person, whether the person was living with them before they died, and whether they attended the funeral.

Lifetime bereavement experiences were also measured with three items from the Life Events Checklist (LEC) of the CASE Study (Hawton et al., 2006), which enquires about several negative lifetime experiences, including the death of someone close. The three items concerning experiences with death included, "*Has anyone among your immediate family (mother, father, brother, or sister) died?*", "*Has anyone close to you died?*", and "*Has anyone among your family or friends committed suicide?*" A follow-up question was added to the suicide item to identify who had died by suicide, if applicable. New variables were then created to reflect whether participants were bereaved or non-bereaved, and further, whether they were bereaved by suicide or non-suicide deaths (to test the volitional phase).

*Life events.* The remaining 17 items from the LEC (Hawton et al., 2006) unrelated to bereavement experiences measured the number of negative life events experienced by participants (as per Madge et al., 2011). In this study,  $\alpha = .76$ , for the full 20-item measure, similar to that reported by Hasking et al. (2015), where Cronbach's  $\alpha$  was .75 for the full scale.

#### **6.2.2.4 Motivational Phase Variables.**

*Defeat.* The Defeat Scale (Gilbert & Allan, 1998) measured perceptions of defeat, i.e., failed struggle and loss of rank or status. In this study, Cronbach's  $\alpha = .95$ .

*Entrapment.* The Entrapment Scale (Gilbert & Allan, 1998) was used to capture feelings of entrapment related cognitions. The total scale had high internal consistency at  $\alpha = .94$ .

*Coping.* Coping was assessed using the Brief COPE (Carver, 1997), measuring the degree to which a person uses specific strategies to deal with stressful situations. As per Blomgren et al. (2016) and Moore et al. (2011), adaptive and maladaptive coping subscales were computed from the 28 items. Cronbach's  $\alpha$  was .83 for the adaptive subscale, and .74 for the maladaptive subscale.

*Self-Esteem.* The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure overall self-worth and positive and negative feelings towards oneself. In the current study, internal consistency was high at  $\alpha = .91$ , similar to previous adolescent research ( $\alpha$  range = .85 to .89 with adolescent samples; Brausch & Gutierrez, 2010; Dori & Overholser, 1999; Grøholt et al., 2005).

*Social Support.* The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) measured perceptions of social support adequacy from family, friends, and significant others. Internal consistency was high for all three subscales calculated: family ( $\alpha = .88$ ), friends ( $\alpha = .90$ ), and significant other ( $\alpha = .88$ ), similar to the extant literature ( $\alpha$  range = .87 to .95 across the subscales; Abbott & Zakriski, 2014; Cauty-Mitchell & Zimet, 2000).

*Stigma.* The Short Form of the Stigma of Suicide Scale (SOSS; Batterham et al., 2013b) measured attitudes and stigma towards people who die by suicide. Internal consistency of the three subscales in this study was high; Cronbach's  $\alpha$  for the stigmatisation, isolation/depression, and glorification/normalisation subscales was .83, .85, and .75, respectively.

### **6.2.2.5 Volitional Phase Variables.**

*Suicide vs non-suicide bereavement.* As mentioned above, three questions on bereavement causes were taken from the LEC (Hawton et al., 2006) regarding experiences with the death of an immediate family member, someone close, or a family or friends' suicide. A composite variable was then created to identify whether a participant was suicide or non-suicide bereaved. Participants who reported experiencing a suicide death were grouped in the suicide-bereaved group (this included instances where they also reported exposure to a non-suicide death), and those reporting the death of an immediate family member or someone else close, but not a death by suicide, were deemed non-suicide bereaved.

*Self-harm of family or friends.* Two questions from the LEC (Hawton et al., 2006) asked about self-harm behaviours among one's friends or family, e.g., "*Has anyone among your [family]/[close friends] attempted suicide or deliberately harmed themselves?*"

### **6.2.2.6 Final Questions.**

*Final open-ended questions.* A space was given for additional comments, and a final open-ended question on things young people can do to lift their mood when they are feeling sad or depressed, for participants who completed the questionnaire early.

## **6.2.3 Procedure**

The research protocol was reviewed and approved by the University of Strathclyde Ethics Committee. All 32 local education authorities (LEAs) in Scotland were contacted for permission to conduct the study with schools in their area, and 14 provided this approval. All secondary schools within participating areas ( $n = 153$ ) were contacted and invited to take part, of which 9 agreed to participate. An information sheet detailing the nature of the

investigation and consent form were sent out as hard copies to all parents/guardians of pupils in participating year groups (see Appendix F). Active parental consent was initially required before pupils were approached about taking part. However, significant difficulties with recruitment (i.e., low response rates) led to discussions (both within the supervisory team as well as with schools) around the suitability of parental opt-in consent. Previous research has shown that active parental consent often results in low recruitment rates and biased samples, potentially underrepresenting individuals from the population of interest (Kelly & Halford, 2007). A request for an amendment to use passive parental consent was ultimately submitted and approved by the University Ethics Committee. One school subsequently used opt-out parental consent. Further reflection on these challenges is given in Chapter 8.5.1.

Each secondary school was visited in advance of the questionnaire date, and pupils with parental consent were addressed in an assembly where the nature of the study and procedures were explained. Pupils were invited to ask questions and were given information sheets to take away and read in their own time so they could decide whether they wished to take part; these information sheets made clear that the research would ask about past experiences of bereavement as well as self-harm or suicide (see Appendix E). Approximately two weeks later, pupils were invited to complete the paper questionnaire individually during a class period, after providing informed consent. Two versions of the anonymous questionnaire with counterbalanced measures were distributed to avoid order effects, and so that pupils would not be able to gauge the progress of their peers in answering sensitive questionnaire items during the session (thus maintaining a level of privacy and confidentiality). Two open-ended questions were also included at the end for this purpose. Completion of the questionnaire took approximately 30 minutes, and the researcher was present at all times to address questions or concerns (although no concerns were raised at this time). Participants were given blank sealable envelopes in which to return their completed surveys, and it was

stressed that only members of the research team would open these. Upon completion, pupils were debriefed and given a pamphlet of relevant support contacts and organisations they could reach out to, should they feel the need (see Appendix I). This document was tailored to each school, with specific staff members highlighted at the school's request. No other incentives or payments were provided. All schools taking part at baseline also agreed to take part in the follow-up. Pupils were invited to complete the questionnaire a second time approximately 6 months later, after providing informed consent again, under the same conditions.

#### **6.2.4 Data Analysis**

##### **6.2.4.1 Data Entry.**

Questionnaire responses were inputted manually into SPSS. Two files were used for data entry, corresponding with each of the versions of the questionnaire, before being merged once data entry was complete. Ten percent of the inputted questionnaires were checked for accuracy, and descriptive statistics were used to identify implausible answers which may have reflected errors in data entry (e.g., entry of "22" instead of "2"). All reverse coding for scale items was completed after all data had been inputted and merged. Details of possibly spoiled questionnaires were noted in the file, such as participants not seeming to take the questionnaire seriously.

##### **6.2.4.2 Missing Data.**

An amount of missing data is to be expected and can occur for a number of reasons. Firstly, participants were advised that they did not need to answer any questions which they felt uncomfortable with, particularly given the sensitive nature of the study. Therefore, some questions may have been purposely omitted. Questionnaires were also completed in paper

form, raising the possibility that items were inadvertently missed. A lack of understanding of some items, participant fatigue or drop-out, or participants running out of time may also have contributed to the amount of missing information in the dataset. There is also the chance of researcher oversight in inputting responses electronically, as data were inputted from the paper questionnaires by only one person.

Missing data is problematic in several ways, and if not dealt with can result in biased results (Hair et al., 2010) with large standard errors, biased parameter estimates, loss of information, low statistical power and consequently higher chance of a Type II error (Dong & Peng, 2013). Missing data is generally recognised as being one of three types: (1) Missing Completely at Random (MCAR), where missing data are a random sample of the observed values and data is not missing in a systematic way; (2) Missing at Random (MAR), where missingness is systematic and based on differences in the observed data; or (3) Missing Not at Random (MNAR), where data is missing systematically and depends on the missing values themselves (Dong & Peng, 2013; Sterne et al., 2009).

There are several ways to deal with missing data depending on its cause or mechanisms. A Missing Value Analysis (MVA) was carried out on baseline data to assess the extent and patterns of missing data; 6.33% of values were incomplete, 68.11% cases had incomplete data, and 98.02% of variables contained incomplete data. There were 48 individual items with over 10% missing data, which included all 16 SOSS items (ranging between 11.9% to 22.7% missing values), 20 Brief COPE scale items (from 10.3% to 13.5% missing values), 11 Entrapment scale items (from 10.3% to 13.0% missing values), and one Self-Esteem scale item (12.4%). A maximum of 10% missing data for each variable can be regarded as acceptable (Dong & Peng, 2013). The pattern of missing values is presented in Appendix N.

To assess whether the data were missing completely at random, Little's MCAR test was computed. This was non-significant,  $\chi^2(5) = 5.09, p = .405$ , indicating that the missing data were most likely MCAR. Consequently, a multiple imputation procedure was deemed suitable for the data. Multiple imputation works by creating  $m$  sets of datasets with substituted values for each missing value, to create complete versions of the data which can be used for analyses. Many statistical procedures support the use of multiply imputed datasets by providing a pooled result (IBM, 2013; van Ginkel & Kroonenberg, 2014). Based on a recommendation that  $m$  should be determined by the percentage of incomplete cases (White et al., 2010),  $m = 68$  imputations were generated based on approximately 68% of cases having incomplete data. Values were imputed for all quantitative measurement scales, and no demographic or categorical information (age, sex, life events, bereavement or self-harm questions) was imputed. This created 68 additional datasets with imputed values which were used for subsequent analyses. SPSS produced pooled results based on the imputed datasets for several statistical analyses, but certain tests are not supported by this function. In these cases, parameter estimates were manually averaged from across the 68 imputed datasets. This approach was also taken by Jones et al. (2014) when dealing with imputed data in SPSS.

#### **6.2.4.3 Planned Analyses.**

Following multiple imputation, the sample was described, and descriptive statistics were used to report the prevalence of bereavement (Aim 1) as well as self-harm (Aim 2). As described in the methodology chapter, to address Aim 3, a series of three hierarchical multinomial logistic regressions (representing the three phases of the IMV model) were used to investigate which variables were associated with self-harm outcomes. As predictions were made for cross-sectional as well as longitudinal outcomes, these analyses were conducted for both time points. Predictor variables at baseline were entered into the model to predict self-

harm group status, from one of three possible outcomes: self-harm enactment, self-harm ideation, or controls with no history of self-harm thoughts or behaviours. Predictors entered in each of the models were:

- a.) Pre-motivational phase: bereavement status, total negative life events
- b.) Motivational phase: defeat, entrapment, coping, self-esteem, social support, stigma of suicide
- c.) Volitional phase: cause of bereavement (suicide vs non-suicide), exposure to self-harm among family or friends

Variables were entered individually into univariate regressions; one with the control group as the reference category, and another with the self-harm ideation group as the reference category. Those which were significant were entered into multivariate models to determine their relative contributions. Holm-Bonferroni corrections were applied to correct for multiple comparisons. Due to limited statistical power, the interactions between moderating variables were not entered as predictor variables as the sample size was not sufficient.

Two hierarchical multiple regressions for each time point were conducted to address Aim 4, using experiences of bereavement at baseline as the independent variable (IV) and defeat and entrapment at T1 (cross-sectionally) and at T2 (longitudinally) as the dependent variables (DVs). Demographic variables (age and gender) at baseline were controlled for in all regressions, on the basis of established differences with respect to self-harm (Hawton, Saunders, et al., 2012). Baseline mood was also controlled for given the associations with self-harm (Hawton, Saunders, et al., 2012; Hawton & van Heeringen, 2009) and bereavement (Berg et al., 2016; Bolton et al., 2016; Kaplow et al., 2010) and in line with previous research (e.g., Dhingra et al., 2015; Hasking et al., 2013; O'Connor et al., 2012), and as depression and anxiety were both significantly associated with self-harm group status at T1 and T2. Defeat was also controlled for in the analysis for Aim 4 predicting entrapment, consistent with

model predictions that perceptions of defeat precede feelings of entrapment. Preliminary assumptions were checked prior to all analyses (Appendix O), and any possible violations were dealt with accordingly. All analyses were carried out using SPSS Version 27, and Microsoft Excel 2013 to manually pool parameter estimates across the imputed datasets.

### **6.3 Results**

A comparison of those who took part at baseline only and those who participated at both time points revealed no significant differences on most of the demographic or studied variables, apart from SES, family social support, and lifetime self-harm; those who took part in T2 came from schools with a lower proportion of pupils receiving free school meals, reported lower family social support, and were more likely to report self-harm at baseline.

Means, standard deviations, and ranges for all predictor variables for participants who completed T1 and T2 are shown in Table 6.2. All scores fell within plausible ranges, and mean depression and anxiety scores fell below the recommended cut-offs to indicate clinical concern (8 and 10, respectively) at T1, although the mean depression score was slightly above the cut-off of 8 at T2. Zero-order correlations between all variables at both time points are shown in Table 6.3. There were significant moderate to strong positive correlations between several measures of distress at both time points, including depression, anxiety, defeat, and entrapment. Similar correlations were apparent between these constructs and the total number of negative life events and self-esteem. Only the maladaptive coping subscale but not the adaptive coping subscale was strongly associated with these variables, and social support was negatively to moderately weakly correlated with most measures. Self-harm ideation and enactment showed a moderate linear relationship with several study variables. Exposure to bereavement and self-harm in family members and friends according to the Life Events Checklist showed weak but significant correlations with several measures.

**Table 6.2**

*Means, SDs and Ranges of Predictor Variables for Participants at T1 (n = 185) and T2 (n = 115)*

	Mean	SD	Range
<i>T1</i>			
Age	13.2	1.5	11 - 17
SES	14.3	5.2	4.74 - 20.99
Depression	7.7	7.2	0 - 25
Anxiety	6.8	6.3	0 - 21
Life Events (20 items)	9.1	6.0	0 - 27
Life Events (17 items)	7.8	5.5	0 - 23
Defeat	17.9	15.1	0 - 64
Entrapment	14.1	14.7	0 - 62
Adaptive Coping	33.9	8.8	16 - 54.43
Maladaptive Coping	22	5.8	12 - 39
Self Esteem	21.5	6.1	10 - 40
SS - Family	5.7	1.4	1 - 7
SS - Friends	5.2	1.6	1 - 7
SS - Sig Other	5.6	1.5	1 - 7
SOSS - Stigma	2.1	0.7	1 - 4.13
SOSS - Iso/Dep	3.6	1.0	1 - 5
SOSS - Glo/Nor	2.5	0.9	1 - 5
<i>T2</i>			
Age	13.7	1.5	12 - 18
SES	13.3	5.2	4.74 - 20.99
Depression	8.6	7.8	0 - 26
Anxiety	8.1	7.1	0 - 21
Life Events (20 items)	9.1	6.8	0 - 29
Life Events (17 items)	7.8	6.1	0 - 25
Defeat	20.2	16.7	0 - 64
Entrapment	16.3	16.7	0 - 57
Adaptive Coping	34.1	9.1	16 - 52
Maladaptive Coping	22.1	6.8	12 - 42
Self Esteem	22.1	6.5	10 - 40
SS - Family	5.5	1.6	1 - 7
SS - Friends	5.3	1.7	1 - 7
SS - Sig Other	5.7	1.5	1 - 7
SOSS - Stigma	1.9	0.7	1 - 4
SOSS - Iso/Dep	3.7	1.0	1 - 5
SOSS - Glo/Nor	2.6	0.9	1 - 4.3

*Notes: All means, SDs and ranges given are based on imputed data, apart from Age and Total Negative Life Events. The SD and range for each scale were manually pooled across the 68 imputations.*

Table 6.3

*Correlations for Study Variables for Participants Who Completed T1 (n = 185) and T2 (n = 115)*

	Age	Gender	Depression	Anxiety	Life Events - 20 Items	Life Events - 17 Items	Defeat	Entrapment	Adaptive Coping	Maladaptive Coping	Self-Esteem
Age	1	0.107	.185*	.158*	.296***	.302***	0.053	.145*	0.115	.154*	0.118
Gender	.218*	1	.344***	.418***	.282**	.269**	.305***	.278***	0.084	.285***	.333***
Depression	0.098	.384***	1	.741***	.600***	.614***	.809***	.754***	.148*	.687***	.717***
Anxiety	0.075	.452***	.810***	1	.543***	.560***	.743***	.650***	.185*	.636***	.610***
Life Events - 20 Items	.315**	.267**	.656***	.597***	1	.986***	.620***	.705***	0.129	.556***	.485***
Life Events - 17 Items	.321**	.278**	.665***	.612***	.989***	1	.631***	.719***	.171*	.551***	.479***
Defeat	0.011	.316***	.871***	.742***	.525***	.531***	1	.784***	0.044	.642***	.817***
Entrapment	0.068	.268**	.832***	.738***	.593***	.567***	.864***	1	0.121	.695***	.640***
Adaptive Coping	.232*	0.055	0.091	0.159	.295**	.286**	-0.011	0.059	1	.408***	-0.047
Maladaptive Coping	0.170	.229*	.730***	.670***	.630***	.637***	.715***	.756***	.362***	1	.613***
Self-Esteem	0.078	.305**	.816***	.711***	.583***	.595***	.848***	.752***	-0.035	.571***	1
SS - Family	-0.128	-.189*	-.566***	-.441***	-.424***	-.438***	-.585***	-.578***	0.155	-.372***	-.590***
SS - Friends	0.066	0.170	-.210*	-0.130	-0.036	-0.027	-.336***	-.244**	.265**	-0.099	-.303**
SS - Sig Other	0.059	0.156	-.232*	-0.071	-0.097	-0.094	-.306**	-.270**	.362***	-0.020	-.324***
SOSS - Stigma	-0.177	-.430***	-.275**	-.207*	-0.120	-0.154	-.274**	-0.157	0.002	-0.019	-.269**
SOSS - Iso/Dep	.274**	.186*	.319**	.363***	.360***	.372***	.240**	.315**	0.090	.187*	.244**
SOSS - Glo/Nor	-0.002	0.039	0.077	0.075	0.066	0.070	0.166	0.088	0.066	0.127	0.125
Bereavement (SGQ)	0.125	0.050	.203*	.194*	.292**	.243*	.195*	.192*	0.053	0.180	.228*
Bereavement (LEC)	0.151	0.164	.373***	.316**	.628***	.536***	.368***	.330***	0.139	.282**	.338***
Self-Harm in Family	0.016	0.131	.369***	.309**	.563***	.567***	.414***	.398***	0.087	.416***	.377***
Self-Harm in Friends	.279**	.445***	.505***	.435***	.552***	.562***	.424***	.467***	0.160	.383***	.399***
Self-Harm Ideation	.226*	.269**	.698***	.660***	.611***	.631***	.624***	.682***	.185*	.601***	.641***
Self-Harm Enactment	0.113	.410***	.693***	.540***	.570***	.592***	.654***	.582***	0.015	.467***	.589***

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$  (two-tailed). Time 1 correlations presented in top right, Time 2 correlations in bottom left. SGQ = Self-Generated Question. LEC = Life Events Checklist. SS = Social Support. SOSS = Stigma of Suicide Scale. Iso/Dep = Isolation/Depression subscale. Glo/Nor = Glorification/Normalisation subscale.

Table 6.3 (continued)

SS - Family	SS - Friends	SS - Sig Other	SOSS - Stigma	SOSS - Iso/Dep	SOSS - Glo/Nor	Bereavement (SGQ)	Bereavement (LEC)	Self-Harm in Family	Self-Harm in Friends	Self-Harm Ideation	Self-Harm Enactment
-.151*	-0.057	-0.018	-.178*	.360***	0.064	0.039	0.095	0.126	.151*	.197**	0.142
-.149*	-0.028	-0.040	-.180*	.177*	0.109	0.072	0.119	.190*	.209**	.238**	.225**
-.344***	-.237***	-.216***	0.010	.306***	.161*	0.112	.275***	.271***	.322***	.580***	.522***
-.288***	-0.138	-0.065	-0.043	.286***	0.062	0.074	.271***	.167*	.312***	.551***	.379***
-.278**	-0.059	-0.115	-0.154	.285**	-0.008	.225**	.483***	.522***	.528***	.483***	.530***
-.270**	-0.054	-0.112	-0.154	.282***	0.006	0.153	.394***	.479***	.544***	.510***	.534***
-.405***	-.278***	-.252**	0.035	.235**	0.119	0.102	.252**	.215**	.267***	.561***	.521***
-.430***	-.230**	-.287***	-0.053	.236**	0.093	0.089	.332***	.270***	.299***	.561***	.516***
0.103	.194**	.216**	0.034	0.123	-0.077	-0.027	-0.001	0.126	0.094	.167*	0.137
-.244**	-0.130	-0.046	-0.132	.236*	0.016	0.114	.257***	.270***	.281***	.561***	.441***
-.391***	-.292***	-.261***	0.056	.220**	.157*	0.103	.223**	.188*	.249**	.537***	.427***
1	.495***	.656***	0.176	-.228*	-0.080	-0.066	-0.134	-0.054	-.215**	-.352***	-.345***
.414***	1	.581***	-0.043	-0.036	-0.108	-0.066	-0.075	0.028	-0.021	-0.131	-0.104
.604***	.636***	1	-0.066	-0.036	-.187*	-0.024	-0.051	-0.043	-0.085	-.149*	-.220**
0.026	-0.134	0.015	1	0.095	0.031	-0.011	-0.128	-0.068	-0.141	-0.112	-0.124
-0.115	-0.106	0.002	0.041	1	-0.057	0.035	0.135	0.087	.190*	.218**	.171*
0.012	-0.098	-0.046	-0.145	-0.024	1	0.051	-0.019	-0.058	-0.012	0.057	-0.059
-0.070	-0.118	-0.108	-0.089	0.026	0.044	1	.547***	0	0.071	.220*	.217*
-.221*	-0.073	-0.110	-0.026	.185*	0.088	.451***	1	.405***	.174*	.314**	.322***
-.230*	-0.094	-0.168	-0.035	0.118	0.066	0	.249**	1	.211**	.343***	.351***
-.222*	0.101	0.118	-.364***	.205*	0.069	0.094	.331***	.273**	1	.463***	.515***
-.490***	-0.057	-0.100	-0.140	.415***	0.021	-0.013	.208**	.189*	.371***	1	.477***
-.541***	-0.146	-.215*	-.339***	.214*	0.167	0.096	.284***	.313***	.290***	.602***	1

Notes: \*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed). Time 1 correlations presented in top right, Time 2 correlations in bottom left. SGQ = Self-Generated Question. LEC = Life Events Checklist. SS = Social Support. SOSS = Stigma of Suicide Scale. Iso/Dep = Isolation/Depression subscale. Glo/Nor = Glorification/Normalisation subscale.

### 6.3.1 Aim 1

#### 6.3.1.1 Prevalence of Bereavement at Baseline (T1).

According to the bereavement question created for this study, 147 (79.46%) adolescents at baseline reported being bereaved during their lifetime by someone important to them, such as a friend or family member. When asked to think about one specific bereavement that impacted them the most, the majority said they had lost a grandparent ( $n = 77$ , 52.38%), an uncle or aunt ( $n = 20$ , 13.61%), or a great-grandparent ( $n = 13$ , 8.84%); Table 6.4 provides a full breakdown of these relationships. Consequently, the age of the deceased person reflected this finding, with most being aged 66 or above at the time of their death ( $n = 82$ , 55.78%). The length of time since the death varied throughout the sample; most were bereaved between 1 and 2 years ago ( $n = 29$ , 19.73%); a breakdown of the time since bereavement is given in Table 6.5. The mean age of young people at the time of the person's death was 9.8 years old ( $SD = 3.1$ , range 1-16 years), and they had known the person for an average of 8.8 years ( $SD = 3.6$ , range 0-16 years). Closeness of the relationship was generally regarded as high ( $M = 4.0$  out of 5,  $SD = 1.0$ ), as was quality of the relationship immediately prior to the death ( $M = 4.5$  out of 5,  $SD = 0.80$ ), and surprise about the death was moderately high overall ( $M = 3.4$  out of 5,  $SD = 1.4$ ). The majority of participants were not living with the person before they died ( $n = 135$ , 91.84%, vs  $n = 9$ , 6.12% who were; 3 did not respond), and approximately half ( $n = 74$ , 50.34%) attended the funeral while the other half did not ( $n = 68$ , 46.26%; 5 participants did not respond). The most frequently reported cause of death was a natural/expected death ( $n = 91$ , 61.90%), followed by natural/unexpected death ( $n = 22$ , 14.97%), suicide ( $n = 11$ , 7.48%), and accident ( $n = 8$ , 5.44%); 13 (8.84%) participants did not know or reported an ambiguous cause of death, and none were bereaved by murder (two participants did not provide a cause of death). There were no significant gender differences in whether or not participants were bereaved.

**Table 6.4***Relationship to Person Who Died for Participants Who Were Bereaved at T1 (n = 147)*

	<i>N</i>	%
grandfather	41	27.89
grandmother	36	24.49
uncle	13	8.84
someone else	10	6.80
great-grandmother	8	5.44
family friend	7	4.76
aunt	7	4.76
father	6	4.08
great-grandfather	5	3.40
cousin	4	2.72
best friend	4	2.72
mother	1	0.68
brother	1	0.68
classmate	1	0.68
other friend	1	0.68

*Note.* Two participants did not provide data on relationship

**Table 6.5***Length of Time Since Death for Participants Who Were Bereaved at T1 (n = 147)*

	<i>N</i>	%
Up to 6 months	12	8.16
Over 6 months up to 1 year	18	12.24
Over 1 year up to 2 years	29	19.73
Over 2 years up to 3 years	21	14.29
Over 3 years up to 4 years	8	5.44
Over 4 years up to 5 years	16	10.88
Over 5 years up to 6 years	6	4.08
Over 6 years up to 7 years	7	4.76
Over 7 years up to 8 years	3	2.04
Over 8 years up to 9 years	2	1.36
Over 9 years up to 10 years	6	4.08
Over 10 years	11	7.48
Don't Know	3	2.04

*Note.* Five participants did not provide data on time since death

When responding to the LEC items, 29 (15.68%) individuals of the sample at baseline reported that someone among their immediate family (mother, father, brother, or sister) died, and 132 (71.35%) said that someone close to them died. Additionally, 21 (11.35%) stated that someone among their family or friends had died specifically by suicide. This discrepancy in suicide loss rates using the LEC items compared to the bereavement questions created for this study (11.35% vs 7.48%) is likely due to the wording of the questions; the item created for this study asked participants if they had experienced the death of someone important to them, and if so, to answer the subsequent questions in relation to whichever death affected them the most. While an individual may have lost a family member or friend to suicide, they may not have considered this the most significant death to them. As this study is concerned with the experiences of losing someone to suicide, and given the small sample of those reflecting on a suicide loss in the bereavement questions (thus not allowing a sufficient sample size for analyses), the LEC items were employed in all subsequent analyses looking at bereavement. Specifically, 136 (73.51%) individuals answered yes to *either* having an immediate family member who died and/or someone else close who died. Of those individuals, 21 also reported knowing someone who died by suicide; therefore, it is assumed that 115 of the 136 (84.56%) were bereaved by a cause of death other than suicide, with the remaining 21 categorised as being bereaved by suicide. The breakdown of the three bereavement groups (non-bereaved, bereaved by suicide, and bereaved by other non-suicide causes) across the self-harm categories is shown in Table 6.6. The correlation between the bereavement item created for this study and the LEC items (bereaved vs non-bereaved) was  $r = .614, p < .001$ . There were no significant gender differences in bereavement according to the LEC data,  $\chi^2(1) = 1.00, p = .318$ .

**Table 6.6***Descriptive Statistics and LEC Bereavement Status Across 3 Self-Harm Groups at T1*

	Controls	Ideation	Enactment	Total
Non-Bereaved (n, %)	29 (15.68%)	12 (6.49%)	5 (2.70%)	46 (24.86%)
Bereaved by Non-Suicide Death (n, %)	66 (35.68%)	28 (15.14%)	21 (11.35%)	115 (62.16%)
Bereaved by Suicide Death (n, %)	5 (2.70%)	4 (2.16%)	12 (6.49%)	21 (11.35%)
Total	100 (54.05%)	44 (23.78%)	38 (20.54%)	182 (98.38%)

*Note.* Due to missing data, the sample size varies by analysis. Bereavement data calculated using LEC items.

### 6.3.1.2 Prevalence of Bereavement at Follow-Up (T2).

Ninety-one (79.13%) of the T2 participants (three did not respond) reported being bereaved by someone important to them during their lifetime, such as a friend or family member, when presented with the single bereavement item created for this study; see Table 6.7 for details on the specific relationships reported. This included 4 individuals who reported an incident bereavement for the first time at T2, 6 months later (this is assumed to be due to having not recalled the death at T1). Further specifics about these losses include:

- Age of young person at time of bereavement (years):  $M = 10.1$ ,  $SD = 3.3$ , range = 2-17 years
- Length of time young person knew the deceased (years):  $M = 8.8$ ,  $SD = 3.6$ , range = 2-17 years
- Closeness of the relationship:  $M = 4.0$  out of 5,  $SD = 1.1$
- Quality of the relationship prior to the death:  $M = 4.5$  out of 5,  $SD = 0.7$
- Surprise about the death:  $M = 3.4$  out of 5,  $SD = 1.4$

- Living with the person before they died: Yes  $n = 10$ , 10.99%, vs No  $n = 80$ , 87.91%; 1 did not respond
- Attended the funeral: Yes  $n = 48$ , 52.75%, vs No  $n = 41$ , 45.05%; 2 did not respond

Additional details regarding the length of time since the death and the causes of death are provided in Tables 6.8 and 6.9.

**Table 6.7**

*Relationship to Person Who Died for Participants Who Were Bereaved at T2 ( $n = 91$ )*

	<i>N</i>	%
grandfather	22	24.18
grandmother	21	23.08
uncle	11	12.09
father	6	6.59
family friend	5	5.49
great-grandmother	4	4.40
classmate	4	4.40
cousin	3	3.30
aunt	3	3.30
someone else	3	3.30
mother	1	1.10
great-grandfather	2	2.20
best friend	2	2.20

*Note.* Four participants did not provide data on relationship

**Table 6.8***Length of Time Since Death for Participants Who Were Bereaved at T2 (n = 91)*

	<i>N</i>	%
Up to 6 months	14	15.38
Over 6 months up to 1 year	6	6.59
Over 1 year up to 2 years	16	17.58
Over 2 years up to 3 years	8	8.79
Over 3 years up to 4 years	12	13.19
Over 4 years up to 5 years	9	9.89
Over 5 years up to 6 years	7	7.69
Over 6 years up to 7 years	3	3.30
Over 7 years up to 8 years	1	1.10
Over 8 years up to 9 years	3	3.30
Over 9 years up to 10 years	2	2.20
Over 10 years	8	8.79

*Note.* Two participants did not provide data on time since death

**Table 6.9***Causes of Bereavement for Participants Who Were Bereaved at T2 (n = 91)*

	<i>N</i>	%
Natural Expected	60	65.93
Natural Unexpected	11	12.09
Suicide	9	9.89
Accident	7	7.69
Murder	0	0.00
Other/Unknown	2	2.20

*Note.* Two participants did not provide data on cause of death

When responding to the LEC bereavement items, 81 participants of the T2 sample of  $n = 115$  reported that someone among their immediate family and/or someone else close had died (13 having experienced an immediate family member death and 80 someone else). Seventeen (14.78%) individuals overall reported knowing someone who had died by suicide (suicide exposed group), of which 10 (8.70%) were reported for the first time since T1. At the

same time, 66 (57.39%) individuals were exposed to a non-suicide death, with 13 (11.30%) reported for the first time since baseline. It should be noted that two individuals responded no to the death of an immediate family member or anyone close, but yes to experiencing a suicide death of family or friends, therefore the total number of individuals in the bereaved group at T2 equates to  $n = 83$ . This may suggest that the two young persons did not consider the suicide decedent as an immediate family member or close person, but nevertheless a relative or friend.

### **6.3.2 Aim 2**

#### **6.3.2.1 Prevalence of Self-Harm at Baseline (T1).**

At baseline, 38 (20.54%) pupils reported having ever engaged in self-harm behaviours during their lifetime (enactment group), while a further 44 (23.78%) reported past self-harm ideation with no history of behaviours (ideation group). Thus, the control group consisted of 103 (55.68%) individuals with no history of self-harm or suicidal thoughts or behaviours.

Overall, females were significantly more likely than males to report self-harm (68.42% to 26.32%; two participants in the enactment group did not report their gender,  $\chi^2(1) = 4.69, p = .030, phi = .177$ ) and thoughts of suicide (69.35% to 27.42%,  $\chi^2(1) = 11.86, p = .001, phi = .273$ ).<sup>6</sup> There were no significant differences between males and females in reporting of NSSI thoughts,  $\chi^2(1) = .723, p = .395$ . The composite variable of self-harm ideation (NSSI or suicidal thoughts combined, used for subsequent main analyses) showed significant gender differences ( $\chi^2(1) = 8.29, p = .004, phi = .230$ ), with females more likely to report this experience.

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<sup>6</sup> All 2x2 chi-square tests throughout are reported with Yates Continuity Correction

With regards to the three self-harm groups (enactment, ideation, controls), no significant group differences were found in ethnicity,  $\chi^2(2) = 2.99, p = .225$ , or year group,  $\chi^2(2) = 3.24, p = .198$ . Descriptive statistics of continuous study variables across self-harm groups at T1 are shown in Table 6.10. Control group participants reported lower levels of depression, anxiety, defeat, entrapment, maladaptive coping, self-esteem, and glorifying/normalising beliefs about suicide, fewer negative life events, and greater social support from family members than both the ideation and enactment groups. The ideation group also differed from the enactment group, reporting lower levels of depression and defeat, and higher levels of stigmatising beliefs about suicide.

**Table 6.10**

*Descriptive Statistics for Continuous Scale Variables for Participants at T1, Within Each Self-Harm Group*

	Controls (n = 103)		Ideation (n = 44)		Enactment (n = 38)		F	p**	$\eta^2$	Sig Differences*
	M	SD	M	SD	M	SD				
Age	12.9	1.4	13.4	1.5	13.6	1.6	4.01	.020	ns	ns
SES	15.0	4.8	12.2	5.8	14.8	5.0	4.68	.010	ns	ns
Depression	4.2	4.8	9.7	6.4	15.1	7.1	54.07	<.001	0.37	C < I, C < E, I < E
Anxiety	3.9	4.8	9.4	5.9	11.5	6.1	34.59	<.001	0.28	C < I, C < E
Life Events (20 items)	6.5	4.6	9.3	4.6	15.1	6.2	33.34	<.001	0.32	C < E, I < E
Life Events (17 items)	5.3	4.2	8.4	4.2	13.3	5.6	37.25	<.001	0.33	C < E, I < E
Defeat	10.5	8.9	22.0	14.3	33.3	16.1	52.79	<.001	0.37	C < I, C < E, I < E
Entrapment	6.8	8.6	18.4	13.5	29.0	16.0	54.10	<.001	0.37	C < I, C < E, I < E
Adaptive Coping	32.4	8.6	35.4	9.5	36.3	7.9	3.56	.032	ns	ns
Maladaptive Coping	19.1	4.6	24.3	5.0	26.9	5.1	43.68	<.001	0.32	C < I, C < E
Self Esteem	18.8	4.7	23.6	6.1	26.5	5.5	34.88	<.001	0.28	C < I, C < E
SS - Family	6.2	1.1	5.4	1.3	4.7	1.8	18.29	<.001	0.17	C > E
SS - Friends	5.4	1.4	5.0	1.8	4.9	1.8	2.09	.130	ns	ns
SS - Sig Other	5.8	1.3	5.6	1.5	4.9	1.9	4.85	.010	ns	ns
SOSS - Stigma	2.2	0.7	2.1	0.8	1.9	0.7	1.64	.203	ns	ns
SOSS - Iso/Dep	3.4	1.1	3.7	0.9	3.9	1.0	4.28	.017	ns	ns
SOSS - Glo/Nor	2.5	0.9	2.7	0.9	2.4	0.8	1.62	.211	ns	ns

*Note.* Due to missing data, the sample size varies by analysis. \*C = Controls, I = Ideation group, E = Enactment group. \*\*Applying a Bonferroni correction, test is significant at the .003 level. SS = Social Support. SOSS = Stigma of Suicide Scale. Iso/Dep = Isolation/Depression subscale. Glo/Nor = Glorification/Normalisation subscale.

Of those who engaged in self-harm, 17 (44.74%) reported that the first time they self-harmed was more than a year ago, 17 (44.74%) between a month and a year ago, and 4 (10.53%) less than a month ago. When asked about the timing of their first episode of self-

harm in relation to any previous bereavements, 6 (15.79%) stated they self-harmed before a bereavement, 19 (50%) after a bereavement, and 11 (28.95%) stated they were not bereaved (2 participants did not respond). Fourteen participants (36.84%) had last engaged in self-harm within the past month, 14 (36.84%) between a month and a year ago, and 10 (26.32%) over a year ago. The main motive cited was to get relief from a terrible state of mind ( $n = 30$ , 78.95%), followed by wanting to punish oneself ( $n = 22$ , 57.89%), wanting to die ( $n = 18$ , 47.37%), wanting to find out whether someone really loved them ( $n = 7$ , 18.42%), wanting to show how desperate they were feeling ( $n = 5$ , 13.16%), wanting to get their own back on someone ( $n = 2$ , 5.26%), and wanting to get some attention ( $n = 1$ , 2.63%); no participants reported they wanted to frighten someone. There were no significant differences in motives for self-harm by gender (range of  $p = .413$  to 1.000).

Of those 62 individuals reporting NSSI thoughts, four (6.45%) stated this occurred before a bereavement, 32 (51.61%) after a bereavement, five (8.06%) both before and after the bereavement, and 16 (25.81%) stated they were not bereaved (five participants did not respond). Of those 49 reporting suicidal thoughts, two (4.08%) stated this occurred before a bereavement, 20 (40.82%) after a bereavement, 10 (20.41%) both before and after the bereavement, and 14 (28.57%) stated they were not bereaved (3 participants did not respond).

### **6.3.2.2 Prevalence of Self-Harm at Follow-Up (T2).**

At follow-up, 33 (28.70%) adolescents reported ever engaging in self-harm, with 9 (7.83%) of these for the first time between T1 and T2. A further 26 (22.61%) individuals reported having experienced self-harm ideation (with no actions) at follow-up.<sup>7</sup> The control

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<sup>7</sup> An accurate rate of new onset self-harm ideation could not be calculated, as some participants reported self-harm ideation only at T2, but had reported self-harm at T1.

group at T2 therefore comprised of 56 (48.70%) individuals who reported no history of self-harm ideation or behaviours at follow-up.

Table 6.11 illustrates how participants responded at both time points. a small number of young people at T2 (approximately 5%) reported having never engaged in self-harm behaviours or experienced self-harm ideation when asked at T2, despite stating that they had when asked at baseline.

**Table 6.11**

*Cross Tabulation of SSHTB Responses at T1 and T2 (n = 115)*

		No at T1 n (%)	Yes at T1 n (%)
Self-Harm Enactment	No at T2	71 (65.14%)	5 (4.59%)
	Yes at T2	9 (8.26%)	24 (22.02%)
Self-Harm Ideation	No at T2	51 (45.54%)	5 (4.46%)
	Yes at T2	9 (8.04%)	47 (41.96%)

*Note.* Due to missing data, the sample size varies by analysis.

Of those who engaged in self-harm at T2, 14 (42.42%) stated that they self-harmed for the first time over a year ago, 13 (39.39%) between a month and a year ago, and 6 (18.18%) less than a month ago. When asked about the timing of their first episode of self-harm in relation to any bereavements, 6 (18.18%) had self-harmed before a bereavement, 22 (66.67%) after a bereavement, and 5 (15.15%) stated they were not bereaved. Eleven participants (33.33%) had engaged in self-harm within the past month, 16 (48.48%) between a month and a year ago, and 6 (18.18%) over a year ago. Motives for self-harm were similar to those at baseline (breakdown provided in Appendix P). There were no significant gender differences in motives (range of  $p = .357$  to 1.000).

Of those 52 individuals reporting NSSI thoughts at T2, four (7.69%) stated this occurred before a bereavement, 26 (50%) after a bereavement, 10 (19.23%) both before and after the bereavement, and 11 (21.15%) stated they were not bereaved (1 participant did not respond). Of those 36 reporting suicidal thoughts, 6 (16.67%) stated this occurred before a bereavement, 13 (36.11%) after a bereavement, 8 (22.22%) both before and after the bereavement, and 9 (25%) stated they were not bereaved.

### **6.3.3 Aim 3**

#### **6.3.3.1 Associations Between Pre-Motivational Phase Variables and Self-Harm at Baseline (T1).**

A hierarchical multinomial logistic regression examined whether pre-motivational phase variables were associated with life-time self-harm group at baseline. Of the predictor variables inputted, namely experiencing any bereavement and the total number of negative life events experienced, only life events was significantly associated with self-harm group status at baseline (Table 6.12). The enactment group differed from both the control and ideation groups, with the enactment group reporting more negative life events than both other groups. A multivariate analysis was not conducted as only one independent variable emerged as significant in the analysis. Results thus partially supported Hypothesis 3a cross-sectionally.

**Table 6.12**

*Univariate Multinomial Logistic Regression of the Association Between Pre-Motivational Phase Variables at T1 and Self-Harm Status at T1*

Pre-Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Bereavement</b>						
Control	Ideation	0.19	0.47	1.21	0.48 - 3.03	.685
Control	Enactment	-0.53	0.64	0.59	0.17 - 2.08	.409
Ideation	Enactment	-0.72	0.64	0.49	0.14 - 1.72	.262
<b>Life Events</b>						
Control	Ideation	0.04	0.06	1.04	0.93 - 1.16	.526
Control	Enactment	0.19	0.06	1.21	1.07 - 1.36	<b>.002</b>
Ideation	Enactment	0.15	0.06	1.17	1.04 - 1.31	<b>.010</b>

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category.

### **6.3.3.2 Associations Between Pre-Motivational Phase Variables and Self-Harm at Follow-Up (T2).**

The same pre-motivational phase variables were entered into analyses predicting T2 self-harm group status, which found that there were no significant differences between the three groups on whether the person was bereaved or on the total number of life events experienced. Results are shown in Table 6.13; no multivariate analysis was required. The results thus did not support Hypothesis 3a longitudinally.

**Table 6.13**

*Univariate Multinomial Logistic Regression of the Association Between Pre-Motivational Phase Variables at T1 and Self-Harm Status at T2 (Controlling for Age, Gender, Depression, and Anxiety)*

Pre-Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Bereavement</b>						
Control	Ideation	-0.20	0.59	0.82	0.26 - 2.63	.740
Control	Enactment	-1.96	1.10	0.14	0.02 - 1.20	.073
Ideation	Enactment	-1.77	1.15	0.17	0.02 - 1.74	.123
<b>Life Events</b>						
Control	Ideation	0.02	0.07	1.02	0.89 - 1.17	.764
Control	Enactment	0.13	0.07	1.14	1.00 - 1.30	.051
Ideation	Enactment	0.11	0.07	1.12	.99 - 1.26	.129

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level, of which there were none in this analysis. The first column indicates the reference category.

### **6.3.3.3 Associations Between Motivational Phase Variables and Self-Harm at Baseline (T1).**

A hierarchical multinomial logistic regression examined whether motivational phase variables were associated with self-harm group status at baseline. In univariate analyses, those in the ideation group reported higher levels of entrapment, were more likely to employ maladaptive coping strategies, and report less available social support from family members compared to controls, as expected (Table 6.14). Comparisons between the enactment group and controls showed similar patterns on the same variables as well as defeat. As predicted, the ideation group did not differ from the enactment group on any motivational phase variable, apart from the enactment group being less likely to endorse glorifying/normalising beliefs about suicide.

**Table 6.14**

*Univariate Multinomial Logistic Regression of the Association Between Motivational Phase Variables and Self-Harm Group Status at T1 (Controlling for Age, Gender, Depression, and Anxiety)*

Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Defeat</b>						
Control	Ideation	0.06	0.03	1.06	1.00 - 1.12	.049
Control	Enactment	0.10	0.03	1.10	1.04 - 1.18	<b>.002</b>
Ideation	Enactment	0.04	0.03	1.04	0.99 - 1.10	.117
<b>Entrapment</b>						
Control	Ideation	0.06	0.02	1.06	1.01 - 1.11	<b>.016</b>
Control	Enactment	0.09	0.03	1.09	1.04 - 1.15	<b>.001</b>
Ideation	Enactment	0.03	0.02	1.03	0.99 - 1.07	.189
<b>Adaptive Coping</b>						
Control	Ideation	0.02	0.02	1.02	0.97 - 1.07	.411
Control	Enactment	0.04	0.03	1.04	0.98 - 1.11	.157
Ideation	Enactment	0.02	0.03	1.02	0.97 - 1.08	.426
<b>Maladaptive Coping</b>						
Control	Ideation	0.15	0.06	1.16	1.04 - 1.30	<b>.008</b>
Control	Enactment	0.20	0.07	1.22	1.07 - 1.40	<b>.003</b>
Ideation	Enactment	0.05	0.06	1.05	0.94 - 1.18	.396
<b>Self-Esteem</b>						
Control	Ideation	0.11	0.05	1.12	1.01 - 1.24	.035
Control	Enactment	0.12	0.06	1.12	0.99 - 1.27	.066
Ideation	Enactment	0.00	0.06	1.00	0.90 - 1.12	.970
<b>SS - Family</b>						
Control	Ideation	-0.39	0.16	0.68	0.50 - 0.93	<b>.017</b>
Control	Enactment	-0.57	0.18	0.57	0.40 - 0.81	<b>.002</b>
Ideation	Enactment	-0.19	0.16	0.83	0.61 - 1.13	.229
<b>SS - Friends</b>						
Control	Ideation	-0.07	0.13	0.93	0.72 - 1.22	.608
Control	Enactment	-0.03	0.16	0.97	0.71 - 1.33	.850
Ideation	Enactment	0.04	0.15	1.04	0.78 - 1.39	.793
<b>SS - Significant Other</b>						
Control	Ideation	-0.11	0.15	0.89	0.67 - 1.19	.431
Control	Enactment	-0.28	0.17	0.75	0.54 - 1.04	.089
Ideation	Enactment	-0.17	0.16	0.84	0.62 - 1.16	.292
<b>SOSS - Stigmatisation</b>						
Control	Ideation	-0.17	0.30	0.84	0.47 - 1.53	.575
Control	Enactment	-0.65	0.38	0.52	0.25 - 1.09	.084
Ideation	Enactment	-0.48	0.36	0.62	0.30 - 1.26	.185
<b>SOSS - Iso/Dep</b>						

Control	Ideation	-0.06	0.23	0.95	0.60 - 1.50	.813
Control	Enactment	-0.03	0.31	0.97	0.53 - 1.80	.928
Ideation	Enactment	0.03	0.31	1.03	0.56 - 1.88	.931
SOSS - Glo/Nor						
Control	Ideation	0.20	0.24	1.22	0.75 - 1.96	.423
Control	Enactment	-0.59	0.32	0.55	0.30 - 1.03	.060
Ideation	Enactment	-0.79	0.32	0.46	0.25 - 0.84	<b>.012</b>

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category. SES = Socioeconomic Status. SS = Social Support. SOSS = Stigma of Suicide Scale. Iso/Dep = Isolation/Depression subscale. Glo/Nor = Glorification/Normalisation subscale.

Significant univariate predictors were entered into a multivariate analysis (Table 6.15), which found that three factors continued to be associated with self-harm group membership: ideation and enactment groups were both more likely to report maladaptive coping compared to controls, as predicted. Both ideation and enactment groups were also more likely to report lower family social support compared to controls, as predicted. The enactment group were also less likely to hold glorifying/normalising beliefs about suicide than the ideation group. Results thus partially supported Hypothesis 3b cross-sectionally.

**Table 6.15**

*Multivariate Multinomial Logistic Regression of the Association Between Motivational Phase Variables and Self-Harm Group Status at T1 (Controlling for Age, Gender, Depression, and Anxiety)*

Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Defeat</b>						
Control	Ideation	0.03	0.03	1.04	0.97 - 1.10	.273
Control	Enactment	0.07	0.04	1.07	1.00 - 1.15	.061
Ideation	Enactment	0.04	0.03	1.04	0.97 - 1.10	.260
<b>Entrapment</b>						
Control	Ideation	0.03	0.03	1.03	0.97 - 1.08	.336
Control	Enactment	0.04	0.03	1.04	0.97 - 1.10	.281
Ideation	Enactment	0.01	0.03	1.01	0.96 - 1.07	.764
<b>Maladaptive Coping</b>						
Control	Ideation	0.14	0.06	1.15	1.02 - 1.30	<b>.022</b>
Control	Enactment	0.20	0.08	1.22	1.04 - 1.42	<b>.012</b>
Ideation	Enactment	0.05	0.07	1.05	0.92 - 1.21	.450
<b>SS - Family</b>						
Control	Ideation	-0.41	0.17	0.67	0.47 - 0.94	<b>.020</b>
Control	Enactment	-0.51	0.21	0.60	0.39 - 0.91	<b>.016</b>
Ideation	Enactment	-0.11	0.18	0.90	0.63 - 1.28	.554
<b>SOSS - Glo/Nor</b>						
Control	Ideation	0.22	0.26	1.25	0.75 - 2.08	.397
Control	Enactment	-0.66	0.35	0.52	0.26 - 1.04	.062
Ideation	Enactment	-0.88	0.34	0.42	0.22 - 0.80	<b>.009</b>

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category. SES = Socioeconomic Status. SS = Social Support. SOSS = Stigma of Suicide Scale. Glo/Nor = Glorification/Normalisation subscale.

#### **6.3.3.4 Associations Between Motivational Phase Variables and Self-Harm at Follow-Up (T2).**

The same motivational phase variables were entered into analyses predicting T2 self-harm group status. Twelve predictors were entered into the univariate model; those in the ideation group were significantly more likely than controls to have reported self-harm

ideation at baseline (Table 6.16). Those in the enactment group were also less likely than controls to report available family social support, less likely to endorse stigmatising beliefs about suicide, less likely to endorse glorifying/normalising beliefs about suicide, and more likely to report self-harm ideation at baseline.

The enactment group did not differ from the ideation group on any motivational phase variable.

**Table 6.16**

*Univariate Multinomial Logistic Regression of the Association Between Motivational Phase Variables and Self-Harm Group Status at T2 (Controlling for Age, Gender, Depression, and Anxiety)*

Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Defeat</b>						
Control	Ideation	0.03	0.04	1.03	0.96 - 1.10	.475
Control	Enactment	0.02	0.04	1.02	0.94 - 1.10	.696
Ideation	Enactment	-0.01	0.03	0.99	0.93 - 1.06	.757
<b>Entrapment</b>						
Control	Ideation	0.07	0.04	1.07	1.00 - 1.14	.053
Control	Enactment	0.07	0.04	1.07	1.00 - 1.16	.055
Ideation	Enactment	0.01	0.03	1.01	0.95 - 1.06	.873
<b>Adaptive Coping</b>						
Control	Ideation	0.00	0.04	1.00	0.94 - 1.08	.923
Control	Enactment	-0.07	0.04	0.93	0.86 - 1.01	.091
Ideation	Enactment	-0.08	0.04	0.93	0.86 - 1.01	.066
<b>Maladaptive Coping</b>						
Control	Ideation	0.04	0.08	1.04	0.89 - 1.22	.611
Control	Enactment	-0.01	0.09	1.00	0.84 - 1.18	.952
Ideation	Enactment	-0.05	0.08	0.96	0.82 - 1.11	.559
<b>Self-Esteem</b>						
Control	Ideation	0.05	0.07	1.05	0.91 - 1.21	.514
Control	Enactment	0.08	0.08	1.08	0.92 - 1.28	.348
Ideation	Enactment	0.03	0.08	1.03	0.89 - 1.20	.688
<b>SS - Family</b>						
Control	Ideation	-0.17	0.23	0.85	0.54 - 1.32	.466
Control	Enactment	-0.63	0.25	0.53	0.33 - 0.87	<b>.011</b>
Ideation	Enactment	-0.47	0.22	0.63	0.41 - 0.96	.034

SS - Friends						
Control	Ideation	-0.01	0.19	0.99	0.69 - 1.44	.972
Control	Enactment	0.09	0.23	1.10	0.70 - 1.71	.687
Ideation	Enactment	0.10	0.20	1.10	0.74 - 1.64	.628
SS - Significant Other						
Control	Ideation	-0.25	0.20	0.78	0.53 - 1.17	.231
Control	Enactment	-0.52	0.22	0.60	0.39 - 0.93	.022
Ideation	Enactment	-0.27	0.20	0.76	0.51 - 1.14	.186
SOSS - Stigmatisation						
Control	Ideation	-0.28	0.44	0.76	0.32 - 1.80	.533
Control	Enactment	-1.32	0.55	0.27	0.09 - 0.78	<b>.016</b>
Ideation	Enactment	-1.05	0.51	0.35	0.13 - 0.96	.041
SOSS - Iso/Dep						
Control	Ideation	0.09	0.35	1.09	0.55 - 2.18	.808
Control	Enactment	-0.14	0.41	0.87	0.39 - 1.95	.741
Ideation	Enactment	-0.22	0.40	0.80	0.37 - 1.76	.582
SOSS - Glo/Nor						
Control	Ideation	-0.55	0.38	0.58	0.27 - 1.21	.145
Control	Enactment	-1.18	0.46	0.31	0.12 - 0.76	<b>.010</b>
Ideation	Enactment	-0.63	0.40	0.53	0.24 - 1.17	.118
Self-Harm Ideation at T1						
Control	Ideation	-2.51	0.73	0.08	0.02 - 0.34	<b>.001</b>
Control	Enactment	-3.08	0.89	0.05	0.01 - 0.26	<b>.001</b>
Ideation	Enactment	-0.56	0.83	0.57	0.11 - 2.90	.498

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category. SES = Socioeconomic Status. SS = Social Support. SOSS = Stigma of Suicide Scale. Iso/Dep = Isolation/Depression subscale. Glo/Nor = Glorification/Normalisation subscale.

Significant univariate predictors were entered into a multivariate analysis (Table 6.17), which found that three factors continued to be associated with self-harm group membership: the ideation group were less likely to report glorifying/normalising beliefs about suicide compared to controls, and more likely to report self-harm ideation at baseline. In addition, the enactment group were less likely to hold stigmatising beliefs about suicide or glorifying/normalising beliefs about suicide, and more likely to have reported self-harm ideation at baseline, when compared to controls. Results thus partially supported Hypothesis 3b longitudinally.

**Table 6.17**

*Multivariate Multinomial Logistic Regression of the Association Between Motivational Phase Variables and Self-Harm Group Status at T2 (Controlling for Age, Gender, Depression, and Anxiety)*

Motivational Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>SS - Family</b>						
Control	Ideation	-0.09	0.28	0.91	0.53 - 1.59	.747
Control	Enactment	-0.57	0.31	0.57	0.31 - 1.04	.067
Ideation	Enactment	-0.47	0.23	0.62	0.39 - 0.99	.043
<b>SOSS - Stigmatisation</b>						
Control	Ideation	-0.78	0.57	0.46	0.15 - 1.41	.173
Control	Enactment	-1.70	0.70	0.18	0.05 - 0.73	<b>.016</b>
Ideation	Enactment	-0.92	0.55	0.40	0.14 - 1.17	.094
<b>SOSS - Glo/Nor</b>						
Control	Ideation	-1.64	0.63	0.19	0.06 - 0.66	<b>.009</b>
Control	Enactment	-2.20	0.72	0.11	0.03 - 0.46	<b>.002</b>
Ideation	Enactment	-0.56	0.46	0.57	0.23 - 1.42	.230
<b>Self-Harm Ideation at T1</b>						
Control	Ideation	-3.54	0.98	0.03	0.00 - 0.20	<b>&lt;.001</b>
Control	Enactment	-3.97	1.26	0.02	0.00 - 0.22	<b>.002</b>
Ideation	Enactment	-0.43	0.99	0.65	0.09 - 4.56	.668

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category.

### **6.3.3.5 Associations Between Volitional Phase Variables and Self-Harm at Baseline (T1).**

A hierarchical multinomial logistic regression examined whether volitional phase variables were associated with self-harm group at baseline. Univariate tests showed that among the volitional phase factors, namely suicide vs non-suicide deaths and family or friend self-harm, ideation and enactment groups did not differ from controls on any variable, as anticipated. The ideation group differed from the enactment group only on family self-harm,

where those who self-harmed were more likely to report this experience (Table 6.18). Neither experiencing a suicide nor a non-suicide death were associated with self-harm group membership. A multivariate analysis was not required given that only one variable emerged as significant. Results thus partially supported Hypothesis 3c cross-sectionally.

**Table 6.18**

*Univariate Multinomial Logistic Regression of the Association Between Volitional Phase Variables and Self-Harm Group Status at T1 (Controlling for Age, Gender, Depression, and Anxiety)*

Volitional Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Suicide Death</b>						
Control	Ideation	0.02	0.80	1.02	0.21 - 4.91	.977
Control	Enactment	-1.18	0.74	0.31	0.07 - 1.31	.111
Ideation	Enactment	-1.20	0.68	0.30	0.08 - 1.13	.075
<b>Non-Suicide Death</b>						
Control	Ideation	0.14	0.44	1.15	0.49 - 2.71	.744
Control	Enactment	0.32	0.51	1.37	0.50 - 3.74	.538
Ideation	Enactment	0.17	0.50	1.19	0.45 - 3.16	.729
<b>Family Self-Harm</b>						
Control	Ideation	1.16	0.79	3.20	0.69 - 14.93	.139
Control	Enactment	-0.61	0.64	0.54	0.16 - 1.90	.341
Ideation	Enactment	-1.77	0.72	0.17	0.04 - 0.70	<b>.014</b>
<b>Friend Self-Harm</b>						
Control	Ideation	-0.67	0.45	0.51	0.21 - 1.24	.137
Control	Enactment	-0.93	0.52	0.39	0.14 - 1.08	.071
Ideation	Enactment	-0.27	0.50	0.77	0.29 - 2.03	.594

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level. The first column indicates the reference category.

### 6.3.3.6 Associations Between Volitional Phase Variables and Self-Harm at Follow-Up (T2).

The same volitional phase variables were entered into analyses predicting T2 self-harm group status. In univariate tests, none of the variables, including experiencing a suicide or non-suicide death, as well as family or friend self-harm, emerged as significant predictors of self-harm group membership (Table 6.19). A multivariate analysis was thus not required. The results thus did not support Hypothesis 3c longitudinally.

**Table 6.19**

*Univariate Multinomial Logistic Regression of the Association Between Volitional Phase Variables and Self-Harm Group Status at T2 (Controlling for Age, Gender, Depression, and Anxiety)*

Volitional Phase Variable		<i>B</i>	<i>SE</i>	OR	95% CI for Odds Ratio	<i>p</i>
<b>Suicide Death</b>						
Control	Ideation	-2.02	1.41	0.13	0.01 - 2.12	.153
Control	Enactment	-2.31	1.45	0.10	0.01 - 1.72	.112
Ideation	Enactment	-0.29	0.82	0.75	0.15 - 3.74	.725
<b>Non-Suicide Death</b>						
Control	Ideation	-0.30	0.64	0.74	0.21 - 2.57	.635
Control	Enactment	-1.01	0.79	0.37	0.08 - 1.72	.202
Ideation	Enactment	-0.71	0.74	0.49	0.12 - 2.08	.336
<b>Family Self-Harm</b>						
Control	Ideation	-0.70	0.95	0.50	0.08 - 3.19	.462
Control	Enactment	-1.44	0.96	0.24	0.04 - 1.55	.134
Ideation	Enactment	-0.74	0.79	0.48	0.10 - 2.24	.347
<b>Friend Self-Harm</b>						
Control	Ideation	0.18	0.65	1.20	0.34 - 4.25	.776
Control	Enactment	-1.17	0.70	0.31	0.08 - 1.22	.094
Ideation	Enactment	-1.35	0.67	0.26	0.07 - 0.97	.044

*Note.* Holm-Bonferroni corrections were applied; only the comparisons in bold remain significant at the adjusted significance level, of which there were none in this analysis. The first column indicates the reference category.

Overall, cross-sectional analyses showed that the pre-motivational phase variable of negative life events, several motivational phase variables including maladaptive coping, family social support and endorsing glorifying/normalising beliefs about suicide, and the volitional phase variable of family self-harm were significant predictors of self-harm group membership. This indicated some support for Hypotheses 3a, 3b, and 3c cross-sectionally. Prospective analyses showed that endorsing stigmatising beliefs about suicide, glorifying/normalising beliefs about suicide, and self-harm ideation at baseline, all motivational phase variables, predicted self-harm group membership at follow-up. This indicated support for Hypothesis 3b longitudinally, while Hypotheses 3a and 3c were not supported longitudinally.

#### **6.3.4 Aim 4**

##### **6.3.4.1 Relationship Between Bereavement and Defeat at Baseline (T1).**

A hierarchical multiple regression was performed to test whether experiences of bereavement at baseline predict higher levels of defeat at T1. Age, sex, depression and anxiety were entered into the model at Step 1, explaining 71.3% of the variance in defeat. After entry of bereavement status to the model at Step 2, the total variance explained by the model as a whole was 71.3%,  $F(5, 173) = 86.09, p < .001$ . The bereavement status variable did not explain significant additional variance in the model after controlling for demographic and mood variables,  $F_{\text{change}}(1, 173) = 0.34, p = .580$ . In the final model, only age, depression, and anxiety were statistically significant, with depression recording a higher beta value than the other two significant predictors. Results thus did not support hypothesis 4a cross-sectionally. Results are presented in Table 6.20.

**Table 6.20**

*Hierarchical Regression Testing the Association Between Bereavement Status at T1 and Defeat at T1 (Controlling for Age, Gender, Depression and Anxiety)*

	Variable	$R^2$	$\Delta R^2$	$\beta$	$t$	$p$
Step 1		0.713	0.713			
	Age			-0.124	-2.99	<b>.003</b>
	Gender			-0.075	-1.68	.094
	Depression T1			0.572	9.23	<b>&lt;.001</b>
	Anxiety T1			0.366	5.70	<b>&lt;.001</b>
Step 2		0.713	0.001			
	Age			-0.124	-2.98	<b>.003</b>
	Gender			-0.075	-1.68	.092
	Depression T1			0.573	9.22	<b>&lt;.001</b>
	Anxiety T1			0.362	5.59	<b>&lt;.001</b>
	Bereavement T1			0.023	0.55	.580

*Note.* R Square, R Square Change, and final beta values calculated from mean imputed results as pooled values not given by SPSS.

#### **6.3.4.2 Relationship Between Bereavement and Defeat at Follow-Up**

##### **(T2).**

A similar analysis with T2 defeat as the DV was conducted to examine longitudinal predictions. Age, sex, depression and anxiety entered into the model at Step 1 explained 50.8% of the variance in defeat. After entry of bereavement status to the model at Step 2, the total variance explained by the model as a whole was 52.5%,  $F(5, 105) = 23.22, p < .001$ . The bereavement status variable did not explain significant additional variance in the model after controlling for demographic and mood variables,  $F$  change  $(1, 105) = 3.82, p = .054$ . In the final model, only age, gender, and depression were statistically significant, with depression recording a higher beta value than the other two significant predictors. Results thus did not support hypothesis 4a longitudinally. Results are presented in Table 6.21.

**Table 6.21**

*Hierarchical Regression Testing the Association Between Bereavement Status at T1 and Defeat at T2 (Controlling for Age, Gender, Depression and Anxiety)*

	Variable	$R^2$	$\Delta R^2$	$\beta$	$t$	$p$
Step 1		0.508	0.508			
	Age			-0.165	-2.36	<b>.019</b>
	Gender			0.197	2.60	<b>.009</b>
	Depression T1			0.578	5.88	<b>&lt;.001</b>
	Anxiety T1			0.095	0.92	.358
Step 2		0.525	0.017			
	Age			-0.167	-2.42	<b>.016</b>
	Gender			0.199	2.66	<b>.008</b>
	Depression T1			0.550	5.61	<b>&lt;.001</b>
	Anxiety T1			0.069	0.67	.504
	Bereavement T1			0.141	1.95	.052

*Note.* R Square, R Square Change, and final beta values calculated from mean imputed results as pooled values not given by SPSS.

### 6.3.4.3 Relationship Between Bereavement and Entrapment at Baseline

#### (T1).

A hierarchical multiple regression was performed to test whether bereavement at baseline predicts higher levels of entrapment at T1. Age, sex, depression, and anxiety were entered at Step 1, explaining 57.8% of the variance in entrapment,  $F(4, 174) = 59.63, p < .001$ . Entry of defeat in Step 2 explained an additional 7% of the variance in the model,  $F$  change  $(1, 173) = 34.30, p < .001$ . After entry of bereavement at Step 3, the total variance explained by the model as a whole was 64.8%,  $F(6, 172) = 52.89, p < .001$ . Bereavement status did not explain significant additional variance in the model after controlling for demographic and mood variables and defeat,  $F$  change  $(1, 172) = 0.23, p = .653$ . In the final model, only depression and defeat were statistically significant, with defeat recording a higher beta value. Results thus did not support hypothesis 4b cross-sectionally. Results are presented in Table 6.22.

**Table 6.22**

*Hierarchical Regression Testing the Association Between Bereavement Status at T1 and Entrapment at T1 (Controlling for Age, Gender, Depression, Anxiety, and Defeat)*

	Variable	$R^2$	$\Delta R^2$	$\beta$	$t$	$p$
Step 1		0.578	0.578			
	Age			-0.005	-0.11	.916
	Gender			-0.035	-0.64	.522
	Depression T1			0.596	7.95	<.001
	Anxiety T1			0.218	2.80	.005
Step 2		0.648	0.070			
	Age			0.056	1.18	.239
	Gender			0.002	0.04	.966
	Depression T1			0.314	3.69	<.001
	Anxiety T1			0.038	0.49	.626
	Defeat T1			0.492	5.73	<.001
Step 3		0.648	0.000			
	Age			0.055	1.17	.241
	Gender			0.002	0.03	.975
	Depression T1			0.315	3.69	<.001
	Anxiety T1			0.035	0.44	.657
	Defeat T1			0.491	5.70	<.001
	Bereavement T1			0.021	0.45	.653

*Note.* R Square, R Square Change, and final beta values calculated from mean imputed results as pooled values not given by SPSS.

#### **6.3.4.4 Relationship Between Bereavement and Entrapment at Follow-**

#### **Up (T2).**

A similar analysis with T2 entrapment as the DV was conducted to examine longitudinal predictions. Age, sex, depression, and anxiety entered into the model at Step 1 explained 45.2% of the variance in entrapment,  $F(4, 106) = 21.91, p < .001$ . Entry of defeat in Step 2 explained an additional 3.3% of the variance in the model,  $F$  change  $(1, 105) = 6.64, p = .012$ . After entry of bereavement at Step 3, the total variance explained by the model as a whole was 49.4%,  $F(6, 104) = 16.90, p < .001$ . Bereavement status did not explain significant additional variance after controlling for demographic and mood variables and

defeat,  $F$  change (1, 104) = 1.78,  $p = .187$ . In the final model, only depression and defeat were statistically significant, with depression recording a higher beta value. Results thus did not support hypothesis 4b longitudinally. Results are presented in Table 6.23.

**Table 6.23**

*Hierarchical Regression Testing the Association Between Bereavement Status at T1 and Entrapment at T2 (Controlling for Age, Gender, Depression, Anxiety, and Defeat)*

Variable	$R^2$	$\Delta R^2$	$\beta$	$t$	$p$
Step 1	0.452	0.452			
Age			-0.096	-1.30	.193
Gender			0.097	1.21	.225
Depression T1			0.580	5.57	<.001
Anxiety T1			0.098	0.89	.372
Step 2	0.485	0.033			
Age			-0.061	-0.84	.403
Gender			0.135	1.70	.090
Depression T1			0.391	3.10	.002
Anxiety T1			-0.010	-0.09	.931
Defeat T1			0.316	2.54	.011
Step 3	0.494	0.009			
Age			-0.063	-0.87	.387
Gender			0.136	1.72	.085
Depression T1			0.373	2.96	.003
Anxiety T1			-0.028	-0.24	.809
Defeat T1			0.314	2.53	.011
Bereavement T1			0.099	1.33	.184

*Note.* R Square, R Square Change, and final beta values calculated from mean imputed results as pooled values not given by SPSS.

## 6.4 Discussion

The primary aims of this study were to assess the prevalence and incidence of bereavement and self-harm among Scottish adolescents, and determine which factors may be associated with self-harm thoughts or actions cross-sectionally, and over a 6-month period (given that longitudinal work is crucial for establishing causal relationships and constitutes particularly strong evidence). Five hypotheses were proposed to examine predictor variables,

based on predictions from the IMV model and bereavement literature. It was expected that participants in the self-harm ideation and enactment groups would differ from controls, but not each other, on pre-motivational phase variables, including bereavement status and negative life events; and on motivational phase variables, namely defeat, entrapment, social support, coping, self-esteem, and attitudes towards suicide. In addition, it was expected that the ideation and enactment groups would differ from controls and each other on volitional phase variables, including exposure to suicide deaths, family self-harm, and friend self-harm, but not exposure to non-suicide deaths. Given that defeat and entrapment are central to the development of suicidal ideation, it was additionally proposed that bereavement experiences would be predictive of higher levels of defeat and entrapment at both time points.

Results partially supported the hypotheses both cross-sectionally and longitudinally. Cross-sectionally, I experience of a greater number of negative life events (pre-motivational phase) differentiated those in the enactment group from both other self-harm groups. Although several motivational phase variables (defeat, entrapment, maladaptive coping, family social support, and endorsing glorifying/normalising beliefs about suicide) predicted self-harm group univariately, only maladaptive coping, social support from family members and endorsing glorifying/normalising beliefs about suicide remained significant multivariate predictors. Family self-harm was the only volitional phase variable to predict self-harm group cross-sectionally. Longitudinally, the only variables to predict self-harm across all the different phases of the model (all in adjusted analyses) were holding stigmatising beliefs about suicide, glorifying/normalising beliefs about suicide, and baseline self-harm ideation, all motivational phase variables. None of the volitional phase variables emerged as significant longitudinal predictors of self-harm.

#### ***6.4.1 Bereavement Experiences as Predictors of Self-Harm and Defeat & Entrapment***

Neither of the LEC bereavement variables (i.e., having experienced any death as a pre-motivational phase variable, or specific causes of death as a volitional phase variable) were associated with self-harm thoughts or behaviours at either time point. Bereavement was also not associated with levels of defeat or entrapment. Wetherall et al. (2018) reported on cross-sectional data from the Scottish Wellbeing Study of 18-34 year olds, and found that acquired capability, mental imagery about death, impulsivity, and having a friend who attempted suicide (VMs) differentiated ideation from enactment groups as expected, but having a family member or friend who died by suicide did not. This study was based on a comparatively large sample of participants (suicide attempt  $n = 403$ , suicidal ideation  $n = 498$ , control  $n = 2534$ ) and also did not find evidence of the effect of suicide exposure on SSHTBs. Future research may benefit from investigating the influence of other characteristics concerning the bereavement, such as the closeness or quality of the relationship, time elapsed since the death, or mental health history (Andriessen et al., 2016; Pitman et al., 2014). While such details were gathered from participants in relation to a specific bereavement experienced, it was not related to the LEC data which was used for the main analyses, so conclusions cannot be made on these features here. Investigating these factors within a larger sample is recommended.

It should be noted that rates of bereavement according to both the question created for this study (79.46% at T1) and the LEC items (73.51% at T1) are consistent with rates reported in previous research. Harrison and Harrington (2001) found that 77.6% of 11-16 year olds were bereaved of a relative or close friend, and Madge et al. (2011), using the same LEC measure employed here, reported that 59.7% of adolescents experienced the death of someone close, and 30.4% a suicide death or self-harm of others (only combined fatal and

non-fatal self-harm data were reported). Paul and Vaswani (2020) reported slightly lower rates with a Scottish sample, where 50.8% of 8 year olds were found to have lost a parent, sibling, grandparent, or other close relative, and by age 10 this increased to 62%. The lower rates in their study may reflect the younger age of the sample (and additionally, bereavement was ascertained through adult respondents, so understandings or recollections of bereavement may have differed between children and adults). The question created for this study asked young people to report on a death which affected them the most; while this may allow for estimation of the general prevalence of bereavement, it is not necessarily reflective of the number of suicide-bereaved young people, as only one specific death was enquired about. The LEC items asked all young people specifically about any suicide deaths they may have experienced, so may therefore be a more accurate measure of exposure to suicide. However, two individuals at T2 reported no deaths of immediate family members or other close persons, while simultaneously reporting a family member or friend's suicide. It is unclear whether this can be attributed to the way the questions were worded, recall bias, or whether those reporting a family member or friend's death by suicide would consider themselves *bereaved by* or *exposed to* suicide, given that additional information was not available regarding the LEC-reported deaths. This relates to the issue of terminology discussed by Cerel et al. (2014), concerning differing levels of impact by suicide, described to be on a continuum: an individual can be exposed, affected, or bereaved in the short- or long-term. This use of terminology reflects the varying levels of emotional attachment and adjustment following a death, and supports the idea that not everyone who is exposed to suicide is deeply affected (Andriessen, Krysinaka, et al., 2017). Despite these conceptual challenges, the information gathered in this study provides an indication that experiencing a death, including one by suicide, is not uncommon among young people living in Scotland.

#### **6.4.2 IMV Model Variables as Predictors of Self-Harm**

Experiencing a greater number of negative life events was predictive of self-harm group membership. This is in keeping with wider research showing the cumulative effect of negative life events on one's risk of SSHTBs (Hawton, Saunders, et al., 2012). It may be that early life adversity acts as a background factor which sets the context for suicidal thinking to emerge (O'Connor, 2011; O'Connor & Kirtley, 2018). Maladaptive coping was a significant cross-sectional predictor of self-harm, with both ideation and enactment groups differing from controls but not each other, as expected. This is consistent with a large body of research showing that low levels of coping skills are associated with suicidal thoughts and feelings (Gooding et al., 2015). In particular, emotion-focused (rather than problem-focused) coping styles have been associated with adolescent self-harm experiences (Guerreiro et al., 2013), including alcohol and drug use, behavioural disengagement and self-blame strategies, which were also measured by the maladaptive coping subscale used here. The finding that only the maladaptive coping subscale was significant here, and not the adaptive one, may be indicative of self-harm representing a coping style in itself. Laye-Gindhu and Schonert-Reichl (2005) suggest that self-harm is an emotion-focused coping strategy that serves to regulate affect. Indeed, research on motivations for self-harm among adolescents found that getting relief from a terrible state of mind was the strongest predictor of engagement in the behaviour (Rasmussen et al., 2016), which may explain the significant findings here.

The significant association between social support and SSHTBs is consistent with previous studies in this area (Kleiman & Liu, 2013; O'Connor & Nock, 2014). Recently, Wan et al. (2019) demonstrated that low levels of social support were significantly associated with self-reported NSSI, suicidal ideation and attempts among a large sample of school pupils in China aged 10-20 years old. The current finding that family social support predicted self-harm group membership at baseline reflects work by Cheng and Chan (2007); using a

translated version of the MSPSS (also employed in this study), they found that family social support was a stronger predictor of suicidality than social support from friends. Tabaac et al. (2016) reported that both social support from family and significant others were associated with suicidal ideation in the expected directions, but only family social support was robustly associated with lifetime suicide attempts. This may be because family members represent a closer and more long-lasting, consistent source of support for adolescents dealing with stressful situations, which may therefore be more influential than support from other social networks.

As predicted, endorsing stigmatising beliefs about suicide differentiated controls from enactment groups longitudinally, and holding glorifying/normalising beliefs about suicide differentiated controls from both ideation and enactment groups prospectively. Higher levels of these beliefs were associated with being in the control group, as hypothesised. On the other hand, ideation and enactment groups differed on endorsing glorifying or normalising beliefs about suicide at baseline, contrary to model predictions, as these groups were not expected to differ on motivational phase measures (the ideation group were more likely to endorse such beliefs). Previous research using the same measure of attitudes towards suicide Batterham et al. (2013a) showed that suicidal ideation was significantly associated with more glorification, as well as less stigmatising beliefs towards people who die by suicide. The authors also found that suicide attempts were unrelated to attitude subscales (stigma, isolation/depression, or glorification/normalisation) or to suicide literacy (knowledge about the risk factors, signs and symptoms, cause or nature, and treatment or prevention of suicide). People who were more exposed to suicide (measured on a 10-point scale from no exposure (0) to attempted suicide (9), with increasing levels of exposure categories presented) had greater literacy and were more likely to attribute suicide to isolation. A possible explanation for both cross-sectional and longitudinal findings here is that individuals who self-harm are more likely to have been

exposed to similar behaviours in others (Dhingra et al., 2015; Mars et al., 2019b). Other research shows that increased exposure may reduce perceptions of stigma (e.g., in relation to mental disorders; Jorm & Wright, 2008). In this study, having family members who self-harmed was indeed associated with self-harm group membership at baseline, which may explain the lack of an association with glorifying/normalising beliefs among those who engaged in self-harm. Interestingly, self-harm group status was not associated with suicide bereavement, however, this may reflect the small sample of young people bereaved by suicide who took part; as such, it was beyond the scope of this research to compare differently bereaved groups. However, Bartik et al. (2015) found that suicide-bereaved young people were less likely to see suicide as related to isolation/depression, and more likely to view suicide as stigmatising and in glorifying/normalising terms, compared to the general population. Further research is needed to assess how attitudes impact help-seeking among those who are affected by suicide, so we can better understand the relationship between attitudes and self-harm. Lastly, it is worth noting that some issues were reported relating to comprehension of individual SOSS scale items. While the measure has been deemed appropriate for use with 11-17 year olds, there was confusion among some pupils about particular terms. This is reflected in the high proportions of missing data on this measure. Personal discussion with the author of the scale noted that there may be some literacy issues with certain items, e.g., suicide as “*vengeful*”, and the measure might not always be suitable for under 15 year olds. This scale requires further empirical testing, and further research on attitudes towards suicide using alternative measures is warranted.

The finding that baseline self-harm ideation predicted self-harm group at follow-up is consistent with previous research (Ribeiro et al., 2016) and theory suggesting that ideation/intention is a proximal predictor of engagement in behaviours (O'Connor, 2011; O'Connor & Kirtley, 2018). Family self-harm was also found to predict self-harm group at

baseline. In a UK population-based cohort study, Mars et al. (2019a) showed that exposure to family self-harm was a significant predictor of future attempts among adolescents who reported suicidal thoughts (but not those who engaged in non-suicidal self-injury). O'Connor, Rasmussen, et al. (2009a) found that repeat self-harm among adolescents over a 6-month period was associated with having family and friends who self-harmed, compared to those with no history of self-harm; however, only family self-harm remained a significant multivariate predictor. These effects may be the result of familial transmission of suicidal behaviour (O'Connor, Rasmussen, et al., 2009a; Pitman et al., 2014), possibly through increased risk from shared environmental stressors or genetic factors, or transmission of psychopathology and impulsive aggression (Brent et al., 2002; Melhem et al., 2007). However, it is difficult to estimate the contribution of genetic or environmental factors. Given that various studies have proposed a role for social modelling of self-harm among non-family members, the fact that self-harm of friends did not predict self-harm group in this study may be the result of limited statistical power. For instance, self-harm among peers significantly predicted future behaviours in four large international studies (De Leo & Heller, 2008), where sample sizes ranged from  $n = 731$  to 11,572, depending on the study time point. Indeed, this effect has been a common finding across adolescent research (Doyle et al., 2015; Hawton et al., 2002). Given the sample size here, further work is needed to test this association with a larger sample.

Some support for the IMV model was found, although the lack of significant associations may be the result of limited statistical power. Indeed, group sizes were relatively small, with 38 individuals in the enactment group, 44 in the ideation group, and 103 controls at baseline; and 33 enactment, 26 ideation, and 56 controls at follow-up. While the number of participants fit the minimum sample size requirements for the analyses chosen, they may not have been sufficient to detect group differences, if they existed, where cell sizes were small.

For instance, one third of cells had values of less than 5 in the suicide death and family self-harm variables at T2. Indeed, a few large standard errors in some analyses may be suggestive of insufficiently powered analyses. Risk factors for self-harm can vary significantly over time and within short spaces (even within a day; Kashyap et al., 2015), making it difficult to predict future outcomes based on measures six months earlier, particularly with limited data. It is also possible that the IMV model does not accurately model the relationship between variables as proposed, or may not be applicable to adolescent samples, or within a Scottish context. Given the absence of an association between several established risk factors for self-harm (including defeat and entrapment) in multivariate analyses, additional research with a larger sample is necessary to investigate these associations, and ultimately help establish whether the model requires further refinement. Because of the sample size, differences between internal and external entrapment were not explored here but would be of interest for future research.

#### ***6.4.3 Strengths and Limitations***

This study provides important data on rates of adolescent bereavement in Scotland, both by suicide and generally, and findings provide valuable estimates which are comparable to previous UK-based research. Importantly, there is a need for more theory-based research, and this study adds to the growing body of evidence testing the IMV model with adolescents, and showing its potential utility as a framework to understand self-harm. A major strength of this study is its longitudinal design; the majority of work in this area has been cross-sectional, or based on hospital samples and population-based registers (e.g., Kuramoto et al., 2013; Li et al., 2014; Rostila et al., 2013), which are advantageous in the high levels of accuracy and completeness, however, do not generally capture community-occurring self-harm which seldom presents to clinical settings, so this study fills a gap in the need for longitudinal

community-based work. The variables chosen for examination here were selected on the basis of theory and deemed appropriate for use with adolescents. The questionnaires were counterbalanced to avoid order effects, and main analyses were adjusted for demographic and mood variables, consistent with previous research (Dhingra et al., 2015; Hasking et al., 2013; Hawton, Saunders, et al., 2012; O'Connor et al., 2012), and thereby reducing the chance of confounding. Participants were gathered from different areas of the country, and the sample was representative of the demographics of the wider population (e.g., in terms of SES and ethnicity).

It is recognised that there are limitations to this study, particularly in relation to the small sample size and related statistical power. Challenges with recruitment were evident for various reasons, including school/gatekeeper unease about the nature of the study, scheduling problems, low response rate from parents or schools, and attrition over the study period. As a result, study uptake was slow. The criteria for participation also required that individuals were not bereaved within the last 6 months, as suggested by previous research as being an appropriate length of time to wait before research participation (Dyregrov et al., 2011). However, this period of risk may reflect specific experiences and needs of vulnerable young people which could not be explored here. For instance, some research shows that risk of suicide is elevated after deaths which occurred recently, compared with those occurring years ago (Feigelman & Gorman, 2008). As the immediate effects of experiencing a bereavement on self-harm could not be measured, it is possible that other factors (e.g., school stress, family or relationship problems) impacted experiences with time. Future research which includes people bereaved more recently (within the first 6 months) may thus help understand whether these findings are applicable to all young people regardless of how long they have been bereaved, and inform immediate postvention responses. Future investigations may also benefit from a follow-up period of greater than 6 months to understand the longer-term

effects of bereavement. Furthermore, the large number of analyses run on the data (both for cross-sectional and longitudinal tests) may have increased the chances of a Type I error. Given the small sample size and associated statistical power, additional data is therefore recommended to reduce the chances of both Type I and Type II error.

Additionally, missing data in quantitative studies is often inevitable, and can typically range from 15-20% within educational and psychological studies (Dong & Peng, 2013). Rates of missing data across individual items in this study were relatively low (6.33%), and data were deemed likely to be missing completely at random. However, it is possible that not all missing data were MCAR, given that certain items may have been missed for different reasons. For instance, demographic questions, which were presented first in both versions of the questionnaire, were generally non-sensitive and likely to be MCAR. More sensitive questions, such as those on bullying or abuse experiences, may have been MNAR. Data may also have been MAR in the case of socio-demographic characteristics contributing to non-response to sensitive items. Therefore, while Little's MCAR test indicated the data were likely MCAR (justifying the use of multiple imputation, as per Field, 2018), it is possible that this approach may have introduced bias. Missing data may therefore have contributed to reducing statistical power and biased parameter estimates, despite that multiple imputation was used to address missing values. Furthermore, the use of paper questionnaires (rather than computer-assisted ones) may have contributed to the rate of missingness, especially given the use of free text response options for some items asking about the person who died. This could have been minimised through the use of computer-assisted questionnaires, as well as presenting option boxes for all survey items (i.e., removing free text responses). In addition, having to manually input paper responses into SPSS may have presented opportunities for human error. Finally, the possibility of residual confounding cannot be discounted, despite that age, gender, and mood were controlled for in all analyses.

#### **6.4.4 Implications**

This study offers several important contributions to the literature. Findings highlight that self-harm ideation and behaviours are prevalent among Scottish youth, many adolescents in Scotland report being bereaved or exposed to the death of someone close to them. Given the potential consequences of bereavement, and particularly suicide bereavement, research investigating the extent and nature of such losses is crucial. As an emerging theoretical model of suicide, the IMV model requires further testing and refinement, and these findings offer some support in relation to specific aspects of the model. Notably, the inclusion of negative life events, coping, social support, beliefs about suicide, self-harm ideation, and family self-harm as constructs within the model are supported, yet support was not found for self-esteem, defeat, entrapment, exposure to suicide/self-harm, and bereavement as model components. These findings have important clinical implications. Being able to pinpoint factors which are predictive of future behaviours provides modifiable targets for interventions and postvention efforts. Identifying stigmatising and glorifying/normalising beliefs about suicide and self-harm ideation as predictors of future behaviours is a particularly important finding in this regard. For instance, these findings suggest that strategies such as teaching enhanced healthy coping techniques, increasing family cohesion and social support, and addressing beliefs and attitudes about suicide (such as challenging perceptions of suicide as stigmatised or glorified), as well as early interventions for self-harm (e.g., targeting self-harm ideation before it becomes severe), may be particularly effective. Similarly, this points to important issues which professionals working with young people might benefit from looking out for in terms of recognising and supporting children at risk. At the same time, evidence regarding other variables which was not wholly consistent with the IMV model, such as the impact of experiences of suicide loss, defeat, entrapment, and other non-significant predictors requires

further testing with larger samples to assess their placement within the model. It may be that the model should be refined, but given the small amount of data and risk of Type I and II errors in this study, further replication is needed with a larger sample to conclude this.

Overall, this study provides novel insight into the experience of bereavement and self-harm among Scottish adolescents, and within the context of theory, offers ideas of potential avenues for effective intervention. Future research is needed to establish whether these results replicate with a larger group and with different types of bereavements. In addition, questions remain about the individual experience of surviving a loss beyond what survey methods can provide. This question may be informed by qualitative work exploring the experiences of adolescents who have been bereaved. Study 3 therefore aims to address this gap to gain a more comprehensive insight into the lived experiences of bereaved young people.

#### **6.4.5 Chapter Summary**

##### **Key points for this chapter:**

- A 6-month prospective study examined cross-sectional and longitudinal predictors of self-harm, and found that 11.35% of adolescents at baseline reported exposure to the suicide of someone they knew, and a further 62.16% had experienced a non-suicide death of a family member or someone else close.
- Rates of SSHTBs indicate that they are frequent among adolescents: 21% of the sample at baseline reported previous self-harm behaviours, and 24% self-harm ideation.
- Key factors which predicted engagement in SSHTBs included: negative life events, maladaptive coping, family social support, endorsing glorifying/normalising beliefs about suicide, and exposure to family self-harm (cross-sectionally), as well as

stigmatising beliefs about suicide, glorifying/normalising beliefs about suicide, and self-harm ideation at baseline (longitudinally).

**Questions for subsequent chapters:**

- What are the lived experiences of adolescents who have experienced a bereavement?
- What factors help and hinder the process of dealing with a death?
- Can the IMV model, and quantitative findings from Study 1 and Study 2, be used to understand the qualitative experiences of bereavement among adolescents?

**Next steps:**

- Chapter 7 discusses findings from a mixed-methods study, which incorporated qualitative interviews with bereaved young people to capture experiences of grief and support following a death. Additional quantitative components of the study looked at self-harm experiences to try and understand how young people see and experience self-harm and whether this relates to or affects their experiences with loss.

## **Chapter 7 Study 3: A Mixed Methods Investigation of the Experience of Grief and Support Among Adolescents Following the Death of Someone Significant**

### **Abstract**

### **Background**

While research suggests that adolescent bereavement is associated with a number of adverse health and social outcomes, limited qualitative work has attempted to capture the voices of adolescents who have lost someone important to them. Previous findings from Chapter 6 of this PhD suggest that, while the specific cause of death may not be a critical factor in this experience in itself, circumstances of the young person's life such as individual coping abilities and available social supports play an important role in shaping experiences with death. This study, guided by the previous quantitative findings of Chapter 6, explored how young people experience a death, to better understand the impact of the loss and the support needs of adolescents living in Scotland.

### **Method**

A qualitative investigation using semi-structured interviews was conducted to explore the experiences of thirteen young people (aged 16-18) who had lost someone due to any cause of death. Face-to-face interviews were audio-recorded and transcribed verbatim, and thematic analysis was used to analyse the interview data. Additional quantitative questions and a card sorting task were employed to capture experiences with self-harm, given the focus of this wider PhD on understanding relationship between loss and self-harm. A mood gauging scale was also used to determine the impact of the study on participants' wellbeing.

## **Results**

Adolescents reported a range of experiences and reactions following a death. Four key themes are presented which illustrate the experiences of interviewees: reactions to death, systems of support, agency and power, and personal growth and perspectives. Several participants also reported engagement in self-harm behaviours (46.15%), as well as experiences of self-harm thoughts (61.54%) and suicidal ideation (61.54%). Limited data obtained from the card sorting task (due to low participant numbers) is interpreted in light of its connections with the developed themes. Participation in the study was not shown to have a detrimental impact on adolescents' mood, and some reported positive feelings and reflections following participation.

## **Conclusions**

Given the variability in adolescent experiences with death and bereavement, the findings suggest that no single best approach to supporting young people exists. Rather, the social and structural context of individuals is important. Adolescents emphasise the value of having the death acknowledged and addressed by their immediate and wider communities, and having their voices heard in terms of their experiences and support needs. Barriers to support for young people exist, such as overstretched services with lengthy waiting lists, gatekeepers, and concerns over confidentiality, which impede their process of grief and need to be addressed. Further implications for policy and practice are considered in light of the findings.

### **7.1 Introduction**

As stated in the systematic review reported in Chapter 3, there has been a lack of theory-based work looking at the experiences of adolescents bereaved by suicide and other causes, but also a dearth of qualitative enquiry into this experience. The results from Chapter 5 (Study 1) suggested that bereavement by suicide was associated with SSHTBs, with those

who engaged in self-harm more likely to report previous exposure to suicide than those with no history of self-harm thoughts or behaviours. General bereavement status and experiencing a non-suicide death were not significant predictors of subsequent self-harm. Expanding on this study using a more theoretically-grounded design, Chapter 6 (Study 2) found that bereavement by any cause (by suicide and non-suicide causes) was not associated with SSHTBs, either cross-sectionally or longitudinally. However, a number of additional variables emerged as significant in predicting outcomes. At baseline, maladaptive coping, family social support, endorsing glorifying or normalising attitudes towards suicide, and family self-harm were predictors of self-harm group. Longitudinal predictors of self-harm included holding stigmatising beliefs about suicide, glorifying or normalising beliefs about suicide, and self-harm ideation at baseline.

Given that specific causes of death were not a key predictor of outcome, it is of interest to look more closely at the influence of the additional factors highlighted by these findings as being significant; namely methods of coping, social supports, beliefs about suicide and self-harm, among others. As limited conclusions can be drawn from survey-based research only, a more in-depth investigation about the qualitative experiences of bereavement among young people is warranted. The mixed methods approach used in this study aims to fill this gap by interviewing young people about their experiences to generate rich, detailed knowledge on how adolescents cope with death and how they give meaning to their experiences. The addition of quantitative tasks in this study will allow for a better description of the sample, as well as an exploration of how events like bereavement may be related to first episode or repeat self-harm (thoughts or behaviours).

As explored in Chapter 2, bereavement during adolescence is associated with a range of adverse physical and mental health outcomes, and can impact social functioning and development, both in the short and longer term (Luecken, 2008; Melhem et al., 2008). Poor

outcomes among bereaved young people include increased rates of depression, PTSD, and alcohol or substance use (Brent et al., 2009; Revet et al., 2018), as well as more internalising problems (Stikkelbroek et al., 2016), greater delinquency, academic difficulties, poorer overall health, and suicidal thoughts and attempts, compared to non-bereaved youth (Feigelman et al., 2016; Pfeffer et al., 2000; Wilcox et al., 2010). Studies suggest that bereavement may also become complicated among adolescents who experience difficult and problematic patterns of grief (Revet et al., 2018).

As highlighted in Chapter 2, several factors can influence the grieving process; however, the impact of these factors on adolescents remains uncertain given the limited evidence base with young age groups (Andriessen, Hadzi-Pavlovic, et al., 2018). The findings from the study reported in Chapter 6 showed that coping strategies were important in relation to self-harm outcomes for participants. Similarly, Ludik and Greeff (2020) demonstrated that coping strategies are important for adjusting and continuing with life after a death. Some bereaved adolescents demonstrate reduced coping capacity through increased avoidance behaviours and poorer ability to plan and problem solve and use social diversion strategies (such as speaking to others) (Bartik et al., 2013b). Others cope through risk taking behaviours such as alcohol and drugs, risky sexual behaviours, and self-harm and suicidal behaviours (Bartik et al., 2013a). In contrast, adolescents who receive emotional support that revolves around talking and feeling understood tend to display better outcomes (Ludik & Greeff, 2020). Social support from peers and relatives is also strongly associated with less intense grief outcomes and better post-bereavement adjustment (LaFreniere & Cain, 2015b; Rodgers & DuBois, 2018; Wilson & Marshall, 2010), and support from more external formal and informal sources is also important for young people (Andriessen, Lobb, et al., 2019). Previous research also finds that attitudes towards specific causes of death, such as suicide, may influence mental health outcomes. Bartik et al. (2015) found that young people bereaved

by suicide were more likely to view suicide as stigmatised, glorified and normalised, and less likely as resulting from isolation and depression. Such views may impact their willingness to seek help regarding mental ill-health and suicide. Similarly, Abbott and Zakriski (2014) found that suicide bereaved young people were more likely than non-suicide-exposed individuals to hold stigmatising beliefs toward suicide, viewing it as normal yet incomprehensible, and levels of social support were related to more hopeful attitudes about suicide (e.g., suicide being preventable and not a taboo topic). Yet, there is limited research on attitudes toward suicide among young people bereaved by other causes of death than suicide.

### ***7.1.1 Study Aims and Questions***

Overall, there is a specific lack of qualitative research in the area of bereavement experiences and self-harm, particularly among adolescents. Qualitative approaches may help to understand some of the mechanisms for outcomes (both positive and negative) following bereavement, and give a voice to young people about their experiences. As such, this study builds on learning from the previous quantitative work of this PhD, and aims to: (1) explore how young people in Scotland are affected by the death of a loved one (suicide or non-suicide), and (2) understand the needs of young people in relation to adjusting to the loss. Furthermore, as this thesis is centred around understanding the relationship between bereavement and engagement in self-harm, a quantitative component of this study aims to (3) uncover the pathways leading to past episodes of self-harm for young people. With this in mind, in order to tackle the final Research Question 5 posed at the end of Chapter 3, three specific questions are proposed for this study:

1. How do adolescents who have lost someone important to them through death (either by suicide or non-suicide causes) understand and experience bereavement?

2. What factors help or hinder the process of dealing with a death?
3. Which factors are identified as important in leading to first episode and recent self-harm among a sample of bereaved young people?

## **7.2 Methods**

### **7.2.1 Recruitment**

A purposive sample of individuals who had experienced the death of someone important to them was sought in order to explore bereavement experiences more closely. Further eligibility criteria for this study included individuals aged between 12-18 years (as per the previous studies, and given the prevalence of self-harm among this age group as described in Chapter 1.3), living in Scotland, and who spoke English. No restrictions were given on type of death experienced nor kinship relationship, but they were asked that at least 6 months had passed since the death in order to minimise distress caused by a more recent loss (as per guidelines by Dyregrov et al., 2011). Participants were sought from various sources including advertisements in public spaces (e.g., noticeboards in community venues), schools and universities (e.g., by approaching schools for participation following local authority approval, or addressing students in university lectures), youth clubs or organisations, self-harm or bereavement support organisations (both offering support for children and young people as well as all ages), and social media or online forums.

### **7.2.2 Participants**

Though the eligible age range of participants was between 12-18 years, as per the previous empirical study (Chapter 6), all participants ultimately recruited were aged 16 or over, thus parental or guardian consent was not required in this case, though they were

encouraged to share the details of the study with them (and were permitted to have an adult present if they wished, which none did).

### **7.2.3 Research Methods**

The majority of materials used in this study (apart from demographic questions) have been detailed and justified in Chapter 4. They are summarised again briefly below, with additional details on the demographic information collected.

*Demographic characteristics.* The demographic details collected in this study included participants' self-reported age, sex at birth, gender identity, ethnicity, and socioeconomic status from the first three digits of their postcode<sup>8</sup> (Appendix Q). Gender and ethnicity category options were chosen based on Scottish census data, and presented in the order in which they appeared in the latest census results (although it is acknowledged that presenting these options in alphabetical order would be preferable).

*Mood.* A single question based on Biddle et al. (2013) was used to measure participants' current emotional state at the start and end of the interview (and after the CaTS task, if applicable), in order to gauge changes in wellbeing as a result of taking part in the study. Participants were presented with the question, "*How are you feeling?*", to be answered using a 10-point visual analogue scale from 0 (poor emotional state, illustrated with a sad face) to 10 (best possible emotional state, illustrated with a happy face; Appendix K). Changes in ratings after the interview (or CaTS task) were explored at the end during the debrief.

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<sup>8</sup> In an attempt to increase confidentiality, only the first three digits of participants' postcodes were requested. However, it was later realised that the Scottish Index of Multiple Deprivation (SIMD), which distinguishes postcode areas by levels of deprivation, may list areas with the same initial 3 digits under various quintiles. Consequently, while the some participants' specific SIMD quintile was ascertainable, others fell under a range of possible values, and thus use of this measure was abandoned so as to avoid speculation or ambiguity when reporting sample characteristics.

*Semi-structured interview schedule.* An interview guide (Appendix B) was piloted and developed based on significant findings from the previous quantitative study (Chapter 6), and aimed to first build rapport by opening with general questions, before delving into some of the more sensitive issues surrounding the bereavement. Questions covered: background information on the person who died and their relationship, knowledge about the death, impact on daily life, coping strategies, social supports, multiple losses, and beliefs about suicide. Participants' beliefs about suicide were asked from all participants to further explore findings from Study 2, where viewing suicide as stigmatised or glorified/normalised was a significant predictor of outcomes. Whether participants had personally self-harmed was not specifically asked about during the interview phase, although if participants volunteered this information, further follow-up questions were suggested in the interview guide to ask about other people they knew who self-harm and how it has affected them (Appendix B). Interviews were audio-recorded with consent.

*Self-harm ideation or behaviours.* A brief written questionnaire (Appendix C) was used to ask participants about prior experiences with self-harm or suicidal thoughts and behaviours. An item from the CASE Study questionnaire (Hawton et al., 2006) asked participants, "*Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*" Follow-up questions then presented to participants who reported a history of self-harm enquired about the first and last time they self-harmed, timing of self-harm in relation to their bereavement, motivations, frequency, and methods used. Two questions from the Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock et al., 2007) additionally asked about thoughts of non-suicidal self-injury and of suicide: "*Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)*", and "*Have you ever had thoughts of killing yourself?*"

*Card Sort Task for Self-Harm.* Participants reporting previous experiences of self-harm or suicidal thoughts or behaviours were offered the opportunity to complete the Card Sort Task for Self-Harm (CaTS; Townsend et al., 2016). This consists of a set of 117 cards (Appendix D) which list statements about possible thoughts, feelings, events, behaviours, services and supports, and outcomes which participants may have experienced prior to and following self-harm (thoughts or behaviours). Participants selected the items relevant to them (the remaining cards discarded), and placed the cards in the order in which they experienced them. Blank cards were available to add additional events or experiences not listed. Seven timestamps were given (from 6 months prior to afterwards) to map the sequence of factors leading to their first and most recent episode of self-harm ideation or action. Completed sequences were photographed with consent. As recommended by Wadman et al. (2017), participants also provided ratings on their confidence about the accuracy of their recollections using a 5-point Likert Scale from 1 (not at all confident) to 5 (extremely confident). This was completed twice, in relation to the first and last episode of self-harm.

#### **7.2.4 Procedure**

Details of the research were explained in advance to all young people interested in taking part, and a copy of the Participant Information Sheet (PIS) was provided in advance of the meeting (digitally and/or a hardcopy; Appendix G). Interviews were arranged at a time and place convenient to the young person, which were generally a private meeting room or office, or other public space. Written informed consent was obtained (Appendix G), and demographic questionnaires (Appendix Q) and pre-study VAS (Appendix K) were completed prior to the interviews. All interviews were audio-recorded with consent and lasted between 14:38 and 55:53 minutes ( $M = 33:25$ ,  $SD = 14:30$ ). Following this, participants were asked to complete the post-interview VAS and self-harm questionnaire (Appendix C), and those who

reported previous SSHTBs were invited to take part in the optional CaTS after having completed the interview. This task took approximately 20 minutes, and those who took part were requested to complete a post-CaTS VAS and provide confidence ratings of the accuracy of their recollections. All participants were debriefed and provided with a list of useful contacts and sources of support (Appendix J), and were given a £10 shopping voucher as a token of appreciation for their time.

### ***7.2.5 Reflexivity***

A process of reflection was undertaken throughout, facilitated by the use of a reflective journal, as is recommended in the literature (Braun & Clarke, 2013) and discussed in Chapter 4.6. This was used to record thoughts and observations immediately following each interview, following transcription, and throughout the course of data processing and analysis to document reflections, considerations and decisions made (see Appendix L for an excerpt).

### ***7.2.6 Ethical Issues***

Ethical considerations in the planning of this study have already been detailed in Chapter 4.5. However, an unanticipated issue which arose during the data collection phase involved the time since death criterion for participation (as explained in Section 7.2.1, a minimum of six months should have passed since the death). Two participants were invited for interview having been bereaved for under six months, which only became known during the interview itself. The process of recruitment involved explaining the criteria for participation in advance, both verbally and in writing (by PIS), and suitability was confirmed by participants themselves prior to meeting. However, details on the specific date of the death(s) were not requested in advance. In both these cases, the interview had already

commenced when the time since death became apparent. In one case, the participant explained they had not realised the length of time since the death. In the other case, the individual had estimated that six months had passed but could not recall the exact date of the death; upon discussion during the meeting, it became evident that it was around five months previously rather than six. In both cases, the researcher weighed the risks and benefits of proceeding with the interview; this included a consideration of: the time and effort already spent by the individual to attend the interview setting, their expressed willingness to continue and have their story heard, the rapport built up to that point, the demeanour of the individual, and the apparent reason for mistaking their eligibility for the study. A judgement was made following discussion with the participants to proceed with the interview at the time, given that the two individuals were keen to take part and share their story. In both these cases, it was felt to be the correct decision to proceed with the interview, and both participants subsequently reflected positively on the experience and gave high ratings (8 or above) on the mood VAS before and after the interview.

### ***7.2.7 Data Analysis***

Digital files (audio recordings and card sequence photographs) were stored on University of Strathclyde servers (audio files were deleted once transcribed), and hardcopies of forms (consent forms, demographic information, and questionnaire responses) were stored in a secure, lockable space within the university. All digitised data were subsequently deposited to the UK DataService ReShare for long term storage and preservation, and linked to the university's Research Data Repository, Pure. This included Word files of the interview transcripts, self-harm questionnaire responses in an SPSS file, and an Excel document with CaTS cards sequences. Potentially identifying information was redacted (and replaced with a

general description of the redacted text) or pseudoanonymised in order to preserve the anonymity of participants.

Audio-recordings of interviews were transcribed verbatim by the researcher. As described in Chapter 4.5 with respect to ethical considerations, all potentially identifying details about participants or other individuals mentioned have been removed or altered in the presentation of findings to preserve anonymity (participants were given the choice to select their own pseudonyms if desired). Descriptive statistics were conducted on demographic and self-harm questionnaire responses, and t-tests were used evaluate changes in VAS scores before and after participation in the interview (and CaTS task, if appropriate). Interview scripts were analysed following Braun and Clarke's (2006; 2013) approach to thematic analysis.

As noted in Chapter 4.4.1.2, thematic analysis was chosen for its theoretical flexibility and utility in analysing rich and complex data. The researcher plays an active role in identifying patterns or themes in the data, following a step-by-step, iterative process to engage with the data (Braun & Clarke, 2006, 2013). Although the IMV model was used to shape the previous studies that make up this PhD, and was also applied to develop the interview schedule which was based on significant findings from Study 2, it was not adhered to rigidly during the interview discussions or analysis phase. This was for two reasons; firstly, not all young people spoke of self-harm or suicidality as being relevant to their story of bereavement. Therefore, it was not felt suitable to constrain the direction of the interviews (or analysis) by aligning them to any theoretical model. Secondly, an inductive approach was used for coding and theme development, using a theoretical perspective of social constructionism (as described in Chapter 4.4.1.1), so as to interpret the narratives from the point of view of participants within their own understandings of the world. Social constructionism asserts that understandings and perceptions of the world are products of our

social interactions with others (Braun & Clarke, 2013; Burr & Dick, 2017). Neimeyer et al. (2014) argue that individuals reconstruct their new reality and search for meaning after a death not only at an individual level, but in a broader community and cultural context, and thus it is meaningful to approach the study of grief and bereavement through a lens of social constructionism. The thematic analysis applied here involved a six-stage process, including:

1. *Getting familiarised with the data.* Interviews were conducted and transcribed by the researcher. All transcripts were re-read multiple times during the analysis, which allowed for re-familiarisation and immersion in the data.
2. *Generating initial codes.* Initial ideas and labels were noted to capture important features from the data, and transcripts were re-visited several times to develop and refine these codes. Relevant data extracts were then collated for each code. This process was initially conducted manually on paper copies of the data, and later moved digitally with the aid of computer software (NVivo 12). This second iteration was done without referring to the initial coding, to be able to make comparisons with the first version.
3. *Generating initial themes.* Codes were examined to identify potential patterns of meaning in the data to represent initial themes. Data were then collated for each potential theme.
4. *Reviewing themes.* Potential themes were checked against the wider dataset and other candidate themes, and were refined or discarded where appropriate. A thematic map was developed to capture the patterns and relationships between the different themes and sub-themes.
5. *Defining and naming themes.* Details of each theme were clarified, including overlapping areas that required further refinement, and themes were given clear definitions and names.

6. *Writing up.* Data extracts were selected to provide examples to illustrate the findings, and the current chapter was produced to address the research questions and contextualised in the wider literature.

This recursive process of engaging with the different stages of analysis resulted in the generation of four final overarching themes: reactions to death, systems of support, agency and power, and personal growth and perspectives. An excerpt of a transcript and example coding and theme generation is provided in Appendix R. Quality checks included a process of cross-checking with one supervisor (SP), where all interview transcripts were read by SP to get an overview of the data. Two transcripts were then selected at random for a more detailed comparison, where specific coding decisions were compared, and initial overall themes were discussed. These discussions took place after developing the themes (alongside stage 5), such that any refinements could be made to the thematic framework where appropriate, such as the naming of themes and merging overlapping subthemes. This approach of quality checks is supported by the literature, e.g., COREQ criteria state that the use of multiple coders may suggest a deeper, more comprehensive understanding of a topic (Tong et al., 2007). COREQ guidelines were used to guide the reporting of qualitative findings throughout this chapter.

Although the study's original intention was to have a larger sample of participants bereaved by suicide in order to explore any potential differences in experiences due to cause of death, the recruitment phase was disrupted due to the COVID-19 pandemic restrictions implemented in the country, as discussed in Chapter 4.4.1.2. It was felt by this point the addition of new data would not likely generate novel findings in relation general experiences of bereavement captured by the interviews, and thus data saturation had been reached for this aspect of the study (Fusch & Ness, 2015; Guest et al., 2006). It was acknowledged that limited conclusions would be possible comparing specific causes of death.

The final aim of this investigation was to explore the pathways leading to self-harm through the use of a novel card sorting task. This would ideally have involved quantitative analyses of selected card sequences to test the temporal relationships between variables, going into detail around the sequence of events leading to self-harm for those young people. With the collection new data no longer feasible due to COVID-19, recruitment was ended with the acknowledgement that detailed statistical analyses of the CaTS data would not be possible. As discussed in Chapter 4.4.3.1, the CaTS data were instead described with reference to how the selected cards mapped onto predictions from the IMV model more generally, with descriptive statistics and selected card frequencies presented for further details.

## **7.3 Results**

### **7.3.1 Participants**

Thirteen young people aged 16-18 years ( $M = 17.7$ ,  $SD = 0.6$ ) took part in this study. They were recruited from: universities ( $n = 7$ ), public advertisements ( $n = 3$ ), organisations ( $n = 1$ ), social media ( $n = 1$ ), and word of mouth ( $n = 1$ ). This sample included eight females and five males, with genders reported as: female ( $n = 8$ ), male ( $n = 4$ ), and don't know ( $n = 1$ ). The majority described themselves as White (84.6%), with a smaller proportion as Asian/Asian Scottish or British (15.4%), roughly consistent with the latest Scottish Census (96.1% White, 2.7% Asian, Asian Scottish or Asian British; National Records of Scotland, 2011).

### **7.3.2 VAS for Mood**

No significant differences were found between pre-interview ( $M = 7.5$ ,  $SD = 2.0$ ) and post-interview ( $M = 7.0$ ,  $SD = 1.9$ ) visual analogue scale ratings,  $t(12) = 1.15$ ,  $p = .273$ , nor

between post-interview and post-CaTS ( $M = 7.1$ ,  $SD = 2.1$ ) scales for those who took part in the card sorting task,  $t(6) = 0.42$ ,  $p = .689$ . Comments offered by participants regarding changes in their scores included feeling a bit sad when thinking about the person who died despite wanting to talk about it, as well as feeling more positive when reflecting on things and realising all the people they had in their life.

### ***7.3.3 Bereavement Characteristics***

Participants primarily focused on one significant person's death during the interview (given that many questions were asking about a specific individual), although several had been bereaved by more than one person and did reflect on other losses during the discussion. The majority of these principal bereavements were the result of natural causes (both expected deaths,  $n = 6$ , and more sudden/unexpected deaths,  $n = 5$ ), with one death by suicide and another by murder. Most young people had primarily experienced the death of a parent ( $n = 8$ ) or grandparent ( $n = 3$ ), as well as a great uncle ( $n = 1$ ) and a cousin ( $n = 1$ ). The time since the death ranged from three months to 15 years. A summary of the participants and details of the deaths, as reported in their own words, is provided in Table 7.1.

**Table 7.1***Demographic Details of Participants and Primary Bereavement, as Reported by Participants*

<b>Participant</b>	<b>Age</b>	<b>Sex</b>	<b>Cause of Death</b>	<b>Time Since Death</b>	<b>Person Who Died</b>
Alice	18	Female	heart attack	5 years	grandfather
Beth	17	Female	cancer	3 years	father
Erica	18	Female	complications of fatty liver due to alcoholism	5.5 years	father
Hans Landa	16	Male	cancer	3 years	father
Jack	18	Male	suicide	8 months	father
James	18	Male	old age, declining health, not sure	5 months	great uncle
Kali	18	Female	heart attack	1 year	grandmother
Kristen	18	Female	cancer	12 years	father
Mark Twain	17	Male	cancer	2 years	mother
Natalie	18	Female	stroke	3 months	grandmother
Rebecca	18	Female	stabbed	2 years	cousin
Shepard	18	Male	seizure	3 years	father
Sophie	18	Female	pulmonary embolism	15 years	mother

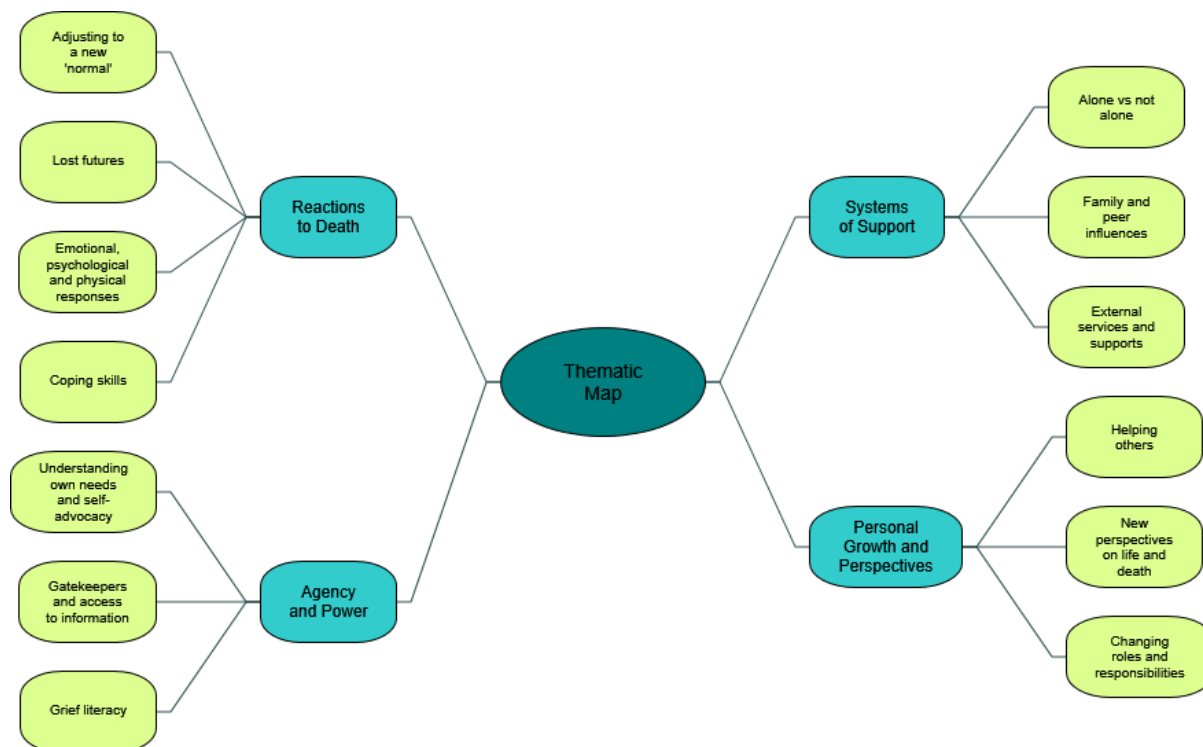
*Note.* Participants were given the option to select their own pseudonyms. For ease of reading, only first names will be used in the remainder of this chapter.

### **7.3.4 Thematic Analysis**

As discussed above, four key themes were generated from the data, each covering a number of relevant subthemes. These are depicted in the map shown in Figure 7.1, and include: reactions to death, systems of support, agency and power, and personal growth and perspectives. Each of these themes and their subthemes are described below, including the overlap among these (discussed below).

**Figure 7.1**

*Thematic Map Showing Overarching Themes and Sub-themes from the Data*



#### **7.3.4.1 Theme 1. Reactions to Death.**

The first theme relates to reactions to death, both before and after the loss of someone important. This includes adjusting to a new ‘normal’, lost futures, emotional and psychological responses, and coping skills. Given that the interview questions prompted participants to think about a specific individual who had died, much of the content relates to their reactions to that specific significant loss, although additional losses and deaths were sometimes discussed.

*Adjusting to a new ‘normal’.*

For some individuals, adjustment to loss began prior to the death. Those anticipating a death, such as in cases where their significant person’s health was deteriorating, had the

opportunity to prepare themselves for the event, or for changes associated with the death. In some cases, the person had moved out of the family home, such as to a hospice, so their daily routine had already altered while they were still alive. As a result, the participants had already begun to adapt to the person not being physically part of their everyday lives. As Beth described:

*It was weird like coming home [after he died], obviously he wasn't there but like at the same time, he had been in hospital for like two months, so it was kind of like by that point we were sort of used to it, so it wasn't like a complete like, "Oh my God he's not in the house anymore", like he isn't having dinner with us anymore 'cause he hadn't been, so it was kind of good to have that kind of preparation. 'Cause then it wasn't totally brand new. (Beth, father, cancer)*

Others noticed their relationship with the person had changed in the lead up to their death due to a deterioration in the person's physical and mental health. For example, Kali recalled how her grandmother was diagnosed with dementia, which resulted in anger issues and conflict between family members, and in turn this led to a breakdown of their relationship as she did not know how to deal with the illness. Likewise, other young people described visual memories of seeing their significant person's health deteriorating as their body grew frailer or they lost weight, were unable to get out of bed, and noticed changes in their behaviours such as losing the sense of thoughts or time. As a result, some participants expressed a sense of relief that their loved one was no longer in the pain they had witnessed, and saw the death as "a blessing in disguise" (Mark, mother, cancer). This suggests that witnessing the deterioration, pain, or distress in the person (and its effect on other relationships) helped to understand, and for some, to accept, the death.

Being present when someone dies was also discussed as important in helping adjust to a bereavement. For example, Beth spoke about "the waiting games" being the worst aspect

before her father and later her grandfather's deaths. She described it as a good opportunity to prepare herself and get her emotions out, but nonetheless difficult to just sit around and wait for time to pass. Those who had an opportunity to say goodbye to the person felt this was very important, and reflected on being glad they could have those final conversations. Conversely, when deaths were sudden and unexpected, participants described a sense of shock and unanswered questions that made adjusting to the loss more challenging. For example, when discussing the death of his father due to a seizure, Shepard noted that he:

*was very surprised. Uh, like I said, he was, he wasn't in good health. I know that. I assumed I'd be getting another 10 or so years before he started to go downhill. Err, when my mum did the whole, "[Shepard], we have to talk" thing, my first reaction was, "Oh! It's my grandad". Because he has quite – well, had, he's dead now, but he had quite a serious case of dementia at the time. Ah, or thought it might have been my dog, 'cause he's old, arthritic, and... so it was a total.... just, straight out of left field, no warning or anything like that. (Shepard, father, seizure)*

Yet, in the immediate aftermath of a sudden death, attending to matters such as dealing with the person's estate and personal possessions (reported by two individuals), or planning the funeral, was reflected on as a helpful experience by several participants. It was a way to actively engage with the death, and gave people a sense of closure and acceptance of the finality of the death.

In terms of longer-term adjustment to a new 'normal', a few participants saw a change in their caregiver(s) or relocation to a new area or school after the death of the person they knew. This sometimes resulted from losing their only surviving caregiver and having to move in with relatives, complications with alcohol and violence in the family following the death that led to ending up in foster care, or moving in full time with their remaining caregiver as

their parents had previously shared custody. These changes were seen as very impactful and complicated the process of dealing with the death.

*I guess, while my birth family isn't really dead, uh, I do feel I've lost them because I cannae speak to my birth mum anymore. Same goes to my sister. Because of everything that happened, and, I'm glad that I'm not speaking to them anymore, because there were a lot of issues, uhm, but I do feel it's a shame that I've lost them.*

(Hans, father, cancer)

Although the interviews explicitly focused on a specific death which impacted them the most, death was a common experience in the lives of these young people (nine of the 13 participants reflected specifically on other deaths they had experienced). Other deaths included the loss of grandparents, uncles, cousins, family friends, neighbours, and pets. Some individuals spoke about how multiple deaths occurring in a short span “piled up on top of each other” (Mark), and made it harder to deal with the loss of their significant person. Others felt that additional losses through separation or divorce prior to the death became an extra stressor in their lives. Relatedly, several participants had experienced a number of adverse childhood experiences (ACEs), including bullying, experiences of the care system, family violence, alcohol use, family involvement in the criminal justice system, and exposure to family suicide or attempted suicide. As one participant put it, their parents splitting up was something that accumulated on top of everything else, and the loss of their family unit was “another thing missing” that they had to deal with; the death then became the final thing which turned their life upside down for a few months:

*It had already been a really hard year 'cause already that year my parents had split up, I got really badly bullied in school and that had gotten worse, and then that [grandfather's death] was like kind of the last big thing that kind of wiped everything out. (Alice, grandfather, heart attack)*

Conversely, Kristen felt that the experience of multiple bereavements among family and close friends made it easier to deal with death. Thus, while interviews focused on one main bereavement, it was clear that participants often faced a significant amount of loss, and death could at times precipitate additional losses which affected how an individual coped with their main bereavement. As noted under Theme 4, the experience of multiple losses led to some participants recognising that death is a part of life that can happen at any time, and can be difficult regardless of age or circumstances of the individual and of the death.

#### *Lost futures.*

When asked about some of the biggest challenges they faced since the person died, participants reflected on many missed opportunities, events, and futures that the person would not be able to witness. This included family members being born, academic successes, shared hobbies, prom, leaving school, getting into university, and future events such as dating and weddings. These reflections were followed by wondering what their loved one would have thought, and regret over the fact that they would not be there. This is exemplified by a quote from Alice reflecting on the biggest challenges for her:

*...The things that I wish he'd seen. Like me getting straight A's in my National 5s, again my little sister being born, getting into uni, things like that. Like, the fact that he won't be at my wedding, erm, 'cause he always laughed, he always joked about how I wasn't allowed to date till I was thirty, and he was gonna be standing there being the big scary person. Erm and just, that, not being there. It's really difficult. (Alice, grandfather, heart attack)*

*Emotional, psychological and physical responses.*

There were a multitude of emotions that surrounded the deaths. Many spoke about missing the person generally, and expressing sadness and a yearning for them. Family events like holidays or trips were bittersweet, and young people wondered what the person who died would have said or thought about major events. Times of stress made missing loved ones particularly tough as they lacked that trusted person they could turn to. One participant described feeling bitter at realising the “fragility” of life (Hans, father, cancer), and feelings of anger could make family interactions problematic.

*I remember that was a horrible household to live in for a while, 'cause it was just so much anger and hurt and everything.* (Erica, father, alcoholism)

Loneliness and isolation were common experiences across several participants, expressed as a result of losing a confidant and not having clear people to rely on for support. Alice (grandfather, heart attack) explained, “having that person that I was so close to removed, that kind of made me feel a bit more isolated”. In cases where the death resulted in a change in caregivers, which was the case for two participants, the feeling of not fitting in and “intruding on somebody else’s family” could be strong (Sophie, mother, embolism).

As touched upon under the subtheme *Adjusting to a new normal*, a sense of relief was felt by participants who had witnessed the deterioration of their significant person’s health, or who had dealt with strained relationships in the family prior to the death. For instance, Kali (grandmother, heart attack) described that, “after she died, it just felt like this huge like release of tension”. Difficulties with mental health were a frequent topic of discussion. In some cases, young people had struggled with their mental health prior to the death. In other situations, the death preceded mental health struggles and may have been a trigger which “set it off to the extent that it did” (Alice, grandfather, heart attack). Anxiety and depression were common, and traumatic responses were expressed in relation to some deaths. For instance,

Sophie, who had witnessed her mother die of a pulmonary embolism, later experienced anxiety, depression, and PTSD. Rebecca, whose cousin was murdered, developed a constant fear of family members dying and never wanted them to leave the house. Likewise, Erica experienced memory loss, depressive episodes, panic attacks, and losing friends after the death, and described her struggles with her mental health:

*I had lost a lot of memory. I struggle trying to recall things. The year after the death is just gone [...] him dying was like a... it was like popping the cap off of what was already there.* (Erica, father, alcoholism)

Sleep problems and academic struggles were also reported by multiple interviewees. Shepard (father, seizure) spoke about failing exams and being unable to focus after finding out his father had died, while Beth struggled with insomnia around the time of her father becoming ill and for around a year after his death. Alice expressed the impact of sleep on her schoolwork and health:

*I didn't cope well. I would pull two all nighters in a row and then have a twelve hour sleep, and my mum couldn't wake me up for school, I wouldn't get out of bed, my attendance for second and third year were shocking. [...] I would be pulling all nighters, I wouldn't eat, like I would be in my room, especially around study leave, I would be in my room for three days before an exam, and like would completely forget to eat. And my mum would go, "When's the last time you ate?" And I would go, "Genuinely couldn't tell you."* (Alice, grandfather, heart attack)

### *Coping skills.*

A range of coping skills were described in relation to the bereavement; some more helpful than others. Individuals who had acquired effective coping skills prior to the death were often able to employ these in dealing with stress in relation to their bereavement (which

overlaps with *Understanding own needs and self-advocacy*, and *Grief literacy* under Theme 3). Other times, a lack of (healthy) coping mechanisms made adjusting to the death more difficult.

Avoidance was a very common method of coping, where young people reported trying not to think about the death so as not to let it “drag [them] down” (Shepard, father, seizure). In these cases, avoiding the death allowed them to get on with other important tasks. Other times, avoiding the death, or stressful situations more generally, reflected a lack of alternative coping skills. For example, Jack (father, suicide) noted that when he was stressed, he didn’t have coping mechanisms as such but would “*just wait for it to end. ... I just keep going till it either ends or some... just stops being as stressful*”. Similar to avoidance, distraction was another common strategy, though was generally perceived as helpful, and employed during both the dying and bereavement phases. For instance, Beth spoke about music as a way to detach from her father’s progressing illness; for her, music was a way to drown out the noise of her father being ill. Hans spoke about games played with a friend as a way to lighten the mood while his father was in hospital, which made things less “heavy” (Hans, father, cancer). New hobbies such as taking up an instrument or getting a new pet were also seen as positive distractions from their grief.

Isolating oneself from others was at times seen as a positive approach, to “get away” (Beth, father, cancer) and process the immediate aftermath of the death, or as a way to give focus to other matters such as schoolwork. Beth recalled how she had learned to remove herself from situations, have a nap, and think more logically instead of working herself up into a panic. Mark spoke about the benefits of removing himself from stressful situations and taking time to breathe and preparing himself to go back in if need be. Alternatively, for others who reported more difficulties coping with the loss, isolating themselves coincided with

panic attacks, sleep problems, and declining personal health or hygiene, and daily routines or habits.

*I guess I just kind of shut myself off. And I don't think that's a really good way of coping that, 'cause all I did was just play games all day. Uhm, and I noticed like, I'd stay up, I'd get like, I'd sleep during the day, get out during the night, uhm... I didn't care about personal hygiene, stuff like that anymore. (Hans, father, cancer)*

*I cut everyone out. My friends, I- I well- I don't- I think a lot of it a lot of it got compressed in, I didn't deal with it very effectively in any way I don't think. And that was when the panic attacks eventually started coming out. (Erica, father, alcoholism)*

Isolation was closely linked with loneliness (which overlaps with Theme 2 regarding the individuals available for support). For instance, one participant (Shepard, father, seizure) had frequently experienced people letting him down, and therefore felt he could only rely on himself in subsequent moments of stress.

Several participants mentioned video games as a helpful escape. They offered an opportunity to interact and socialise with others, either to discuss the death or conversely to have a break from their grief and simply interact with others. It was also a bonding experience with the people who introduced them to video games. Similarly, reading, television and films were seen as beneficial distractions to “take [their] mind off of things” (Sophie, mother, embolism), and as a way to lose oneself, until “the ugly feeling is gone” (Kali, grandmother, heart attack). Shepard described the benefit of keeping busy with so many activities:

*I distracted myself any way I could. Err, but mainly it was reading. Err, I'd find a quiet corner in some forgotten section of the school, and I'd sit, and I'd read, from, for every free moment. I was known as 'that guy with the headphones', because I always had headphones in. [...] Keep moving forward and you don't die. ... Eh... I'd*

*say I still do that, if I'm honest. I tend to just bounce from one activity to another if I'm not busy I'm sad.* (Shepard, father, seizure)

Focusing on school or work also gave some of the interviewees something else to focus on and worry about. It provided an opportunity to interact with others for support, such as colleagues or classmates who they felt they could speak to. The excitement of new events such as starting university or moving to a new city was equally a positive distraction. In addition, reaching out to others for support was identified as a method of dealing with the death or general stress by several individuals, which overlaps with Theme 2. Having someone to talk to enabled interviewees to get reassurance from others, to think more rationally, to not bottle things up, or to simply be heard.

It was notable that several young people identified humour as their way of coping with death, including as a way to ease tensions or worries about bringing up the subject with others, to normalise situations, and at times to get out of awkward situations. Having a dark sense of humour helped some of the participants make death feel part of everyday life and made serious situations more light-hearted. Kristen described how this has always been her way of coping, although is not always well received by others.

*One of my ways of dealing with like hard things is humour. So like joking about it. But that makes some people very uncomfortable, but my close friends are kind of like, they're fine with it. They'll sometimes make jokes which will just like brighten my day, which is kind of... strange, but it's quite calming I think.* (Kristen, father, cancer)

Finally, self-harm was reported as a method of coping with distress by several interviewees. It was notable that many young people spoke about being aware of self-harm or suicidal behaviours among their friends and peers. Jack was the only participant who reflected mainly on a death by suicide. Yet, many other participants knew others who had died by or attempted suicide or who self-harmed. As one person commented, almost

everyone they know has self-harmed, and “for as long as [they] can remember, this has just been how it is” (Shepard, father, seizure). Self-harm was seen as a method of dealing with distress, and was viewed as a way of gaining control over difficult situations. In many cases, their self-harm followed the bereavement. A few participants had also considered suicide, and in these cases had sought help for their thoughts.

*It was that January after the [month] he died where I started self-harming. I had like, I would isolate myself, like I said, for weeks. I... actually would write down everything I hated about myself. Like, it wasn't just his death, but it was everything happening at that one time, I genuinely felt that my life was just spiralling around me and I had no control. And I would not let myself eat, like it was not a good time. And I've had periods of that since. (Alice, grandfather, heart attack)*

When asked about the biggest challenges she had faced since the death, one participant responded:

*I think not killing myself, because... I... am not an irrational person. I know that things don't last forever, but it's... you still have to live through those six months it takes for things to start easing up. Uhm... so I remember just, I said not to kill myself and, it couldn't get any worse, if that was where I was at. (Erica, father, alcoholism)*

It is worth noting that views on suicide were sometimes changed as a result of witnessing the impact of suicide deaths on their family or friends, as discussed further under Theme 4.

Young people had seen how family members or friends were affected, and it gave them a new perspective on suicide where they had become aware of the impact on those left behind.

#### **7.3.4.2 Theme 2. Systems of Support.**

Grief was not generally experienced in isolation. Young people grieved on their own, as well as in the context of family and peers, and this was influenced by their relationships

with their family, peers, the wider community and external agencies. Each of these levels of support related to differing needs at different times (and these supports were sometimes met or conversely left unmet). This theme concerns young people's perceptions of grieving alone versus not actually being alone, the influence of family and peers, and interactions with the wider community.

*Alone vs not alone.*

Many young people spoke about relying on themselves to cope with their grief and in times of hardship. This was observed in two ways; for some, this self-reliance was a choice, particularly where they had been able to deal with things on their own in the past, and felt it was a good strategy for dealing with grief. Many spoke about being able to manage on their own whilst simultaneously noting they had other resources to fall back on should they feel they needed it, and reflected on these other supportive relationships. For instance, one participant commented:

*I feel like I managed to deal with it quite well, on my own. And then, so, I'm not sure if [professional support] would [help], 'cause, because I have like a, I don't mind dealing with it on my own. I feel like I can- and then, if I do need anyone to talk to, there's my dad, my girlfriend, my big brother, my big sister, so... like a, like I've got quite a good safety, like a good bedrock to stand on. (Mark, mother, cancer)*

In contrast, some young people who dealt with their grief on their own seemed to have less choice in this. For some, this was because they felt they had been let down by others in the past, and did not want to risk asking for further support and being rejected again; other people were unreliable.

*I don't really go for support off anyone. Like, people say it's there, but if I ask, and they say no, that kind of just makes everything worse. So I tend to just... it's a gamble.*

*That's what it is. If I ask, and they say yes, boom, they can help, my own proof of it. If they say no, soul crushing. So instead of rolling that dice, I just do it all myself, because, I don't need- I'm a constant, I can rely on myself. Or as everyone else is an unknown quantity, don't know what people are doing, so I can't rely on them.*

(Shepard, father, seizure)

Alternatively, some young people did not identify clear individuals they could turn to for support.

*I've told, the only one of my friends that actually knows is because his dad was friends with my dad, and the rest of them, I haven't told them. [...] Just not a good opportunity to.* (Jack, father, suicide)

This suggests that having supportive people they could turn to acted as a safety net for young people, whereas those who lacked clear sources of support had no choice but to deal with it on their own. Interestingly, this tendency to cope alone tended to revolve around emotional aspects of grief (rather than practical), suggesting that young people may see emotions as a private issue while other issues are more acceptable to seek support for.

#### *Family and peer influences.*

Families were a significant source of support, as well as role models for young people in terms of grieving, attitudes, and values. Ways of coping seemed to be mirrored from family members. For instance, Erica sought advice from her mother regarding her mental health struggles, and felt reassured to try a medication because her mother was taking the same drug. Kali (grandmother, heart attack), who dealt with her grief in isolation, reflected on her family being poor at communicating emotions, noting that they never spoke about it as a family, and she remains unsure how her parents feel. Mark (mother, cancer) recalled his mother being an active campaigner for an assisted dying charity, and noted, "my mum had an

ideology, I kinda have the same one”. Kristen reflected that she has learned from her mother to be open about death, and “not treat it as a taboo topic”. Similarly, she recalled an instance where she was made to tell her classmates about her father’s death, and her mother’s reaction afterwards led her to reconsider her own feelings about the event:

*Imagine making a six year old stand up in front of your entire class that you’ve just met, and be like, “My dad died”! [...] Not great is it! So I mean at that, at- when I was like that age, I thought nothing was wrong with that. But my mum was furious about it. I mean, I understand that, so I’m still quite annoyed about that. (Kristen, father, cancer)*

As mentioned under Theme 1 with regards to coping skills, participants who had witnessed self-harm or suicidal behaviours among their family (or peer group) sometimes considered self-harm themselves. This suggests that how parents and families deal with and/or managed emotions was an important factor in shaping how the young people both understood and managed death and grief at a personal and social level.

In addition to inherited ways of coping, participants were impacted by the grief of others, particularly family members. Several interviewees spoke of relationships with relatives becoming closer after the death, as they supported each other through challenging moments.

*Even like my gran even- has finally redecorated our house, because like, wallpaper was peeling, like it was, but she didn’t want to. Or things like my gran learning to do things by herself, ‘cause she would never go to a cash machine before, it was always my pappu. So, she was kind of learning how to be by herself. And it has been difficult for all of us, that dynamic change, and, but like, we have got through it together as a family. Although there always will be that almost like hole. (Alice, grandfather, heart attack)*

Where family members had different views on the death, dealing with the loss could be especially challenging. One participant noted that she and her immediate family all felt differently about the death of her father, and clashing personalities and ways of coping resulted in “screaming matches”, and “being stuck in the middle of it was hard” (Erica, father, alcoholism). Some had family members who turned to alcohol and violence, which led to changes in living circumstances (Hans, father, cancer), as discussed under Theme 1. Expressions of grief on social media from family members also resulted in attention for interviewees themselves, which was unwelcome.

*[My sister] posted a lot. She would post photos of him, and every anniversary she'd post photos of him, so because she put things up, people would message me. I know it was her way of coping, but it's just I got wrapped up with it, so everyone knew.*

(Erica, father, alcoholism)

Finally, a number of participants commented that a death does not only affect one person, but ripples out onto other individuals as well. As Hans put it, “it's this whole group [that the death affects], and this whole group affects you again” (Hans, father, cancer). Thus, for participants, grief was experienced as a family, but the individual ways of coping within families both supported and challenged their own experience of grief and bereavement.

Friends and peers were significant in shaping the grief experience outside the family. Some participants discussed sharing a special bond with others who had also experienced a loss. This included one participant (Beth, father, cancer) who described being part of a “community” with classmates who had similarly lost a parent, and all had a shared understanding of each other. Shepard (father, seizure) spoke of bonding with others in a bereavement support group over how “the school system is not equipped to handle bereaved kids”, and Hans (father, cancer) felt he benefited from being able to help a friend who was going through a similar experience. Overall, knowing other bereaved young people provided

a space to be heard and understood, which was not always afforded by non-bereaved friends or peers.

For several participants, input from their friendship group helped bring about a sense of normality, and not make everything about the death. Friends provided light-hearted humour as a distraction (as noted under Theme 1), and they appreciated being able to have “normal” conversations outside their bereaved family environment. It was beneficial to have people ‘on the outside’ to talk to, especially when the death was “so fresh” and “everyone in [the] family was hurting” (Alice, grandfather, heart attack). For those in small rural areas, the community knew about the death, and as a result some felt supported and looked out for. Expanding on this, Kristen described:

*It was again a small village so it was common knowledge by that point, so no one would like kind of ask you about it, so I never really had to really think about it if that makes sense? (Kristen, father, cancer)*

It is notable that these experiences were generally from participants who had willingly told their peers about their loss. Conversely, participants who did not wish to share information about their bereavement were then forced to deal with what they felt were uncomfortable scenarios when their peers learned about it:

*Once I started back at school, and there's like girls that I've never spoken to for months going like, "I'm so sorry," giving me a hug, and I'm like "What you doing? Uuugh. Leave me alone!" (Beth, father, cancer)*

*I remember someone came up to me, and they'd told me, "[Erica] I'm so sorry about your dad dying." I was like "Okay" [laughs], and they were annoyed at me. I was like, "That's just- you could've just left me alone. I just want to come to school and..." ... it was very awkward being the girl with the dead dad for a while. That was the reason that I didn't want the school to find out. (Erica, father, alcoholism)*

Participants also recognised that, at times, their peers were unsure how to react in relation to their bereavement: sometimes they avoided the topic, while others shut down the conversation abruptly. These reactions often inhibited further discussion:

*People tend to ignore it, I find. Like, if they don't mention it, I don't mention it. And... nobody mentions it. So, it doesn't ever come up. It's one of those things where people get really flustered when talking about death. So, they just don't talk about it.*

(Shepard, father, seizure)

*I've spoken to [my boyfriend] about it sometimes but, he's like, I remember trying to tell him the first time [chuckles] like about it as I wanted to speak to him about it, and he's like, "I don't want to talk about sad things." And I just remember thinking... so I don't really speak to him about it much.* (Sophie, mother, embolism)

Likewise, participants also recalled other negative experiences with peers, related to peers expressing discomfort and awkwardness about the bereavement, and this was a barrier to talking about or normalising death. For example, Beth recalled trying to make a joke about her deceased father which was received with silence. Similarly, Sophie remembered a classmate's "massive reaction" to a joke referencing her mother and how she became labelled right away as the "poor wee girl whose mum died", noting that "people walk on eggshells sometimes about stuff like that". This sentiment was reflected by many, who felt that other people became more sensitive around them. As a result, they preferred to stop telling people about the death and avoided talking about it so as not to be treated differently. This suggests that the reactions of peers play an important role in how willing young people are to share and express their grief with others.

*External services and supports.*

The significance of support from the wider community was also mentioned frequently by participants. This mostly included support from schools but also professional agencies and services, or other members of the community such as neighbours and family friends. These supports varied considerably from individual to individual. In smaller areas, support from local community members was strongly valued, as others stepped forward to help when needed. One participant recalled how several people went “the extra mile” to help her and her family after her father died, and she now sees many community members as “aunties and uncles who aren’t blood related” because of how they treated her (Kristen, father, cancer).

At times, it was specific school staff members who shaped experiences. Positive recollections concerned teachers who just “let [them] be there alone” (i.e., sit in a classroom out of lesson hours) without asking why, and just making sure they were alright (Erica, father, alcoholism). Other individual teachers were praised for guiding them towards specific organisations which were helpful in dealing with their grief. Personal approaches by school staff such as teachers periodically taking time out to chat to them were also appreciated by a number of participants.

*I do remember erm, our head of year kind of brought me off from class one day and just told me, you know, “Are you okay, [...] what happened?” I said, and I was... I think that was maybe a week or so after, so I was like, “Ah no, I’m okay”. Yeah it was alright. But yeah the school was there to help. (James, great uncle, old age)*

Good communication and relationships between parents and teachers helped facilitate these experiences. Having responsive teachers made tasks like returning to school after the death easier. This contrasted with experiences of young people who felt that communication was poor, either between their parents and staff, or within the school itself. For instance, one

interviewee reported that her parents had spoken with school staff prior to their return, but this had little impact on the support they were offered. Likewise, Beth recalled with disbelief:

*My mum literally like phoned the guidance teacher the day before [...], and she was like, "Oh yeah just to let you know, [Beth] is actually coming back", 'cause I'd been off for like the whole of June, and like off before then like just with like panicking, like anxiety, stuff like that, I just kind of couldn't force myself to go in, erm, "Just to let you know she is coming back, and her wee sister's starting as well", and the guidance teacher was like, "Great. Don't really care." (Beth, father, cancer)*

Others felt that school staff should have better relayed information about the death amongst themselves once they were made aware of it. Failure to do this resulted in an uncomfortable situation for Mark, where he was asked to explain his absence from class to other teachers, despite having informed his guidance teacher about it; he then felt he needed to say he had been off with migraines so as not to embarrass them, suggesting he saw it as a failure on their part. For some participants, the school did not acknowledge the death with them at all, despite being aware of it. This was not always seen as a problem as some people did not wish to discuss it. In other cases, young people were not offered support where they felt it could have been beneficial. Jack described his experiences with the school following his father's suicide:

Jack: *They knew, they didn't help at all!*

Interviewer: *Really? Oh...*

Jack: *Nope. Pastoral care teacher didn't speak to me at all. Didn't contact me at all.*

Interviewer: *Ah that's a shame. Would you have liked them to?*

Jack: *[nods]*

It was also felt by participants that their voices were not always heard in terms of what support they wanted (which overlaps with *Understanding own needs and self-advocacy*

under Theme 3). Alice described how she was forced to attend a counselling service at her school that she felt was unhelpful, as the counsellor did not ask her any questions, so they “would sit there in silence for the whole time” (Alice, grandfather, heart attack). This left her scared to try therapy when it came up again in the future, as the experience had been so negative. At a later point, she reflected on how the school finally started listening to her, giving her a “get out of class card” and space to deal with her panic attacks, which then made remaining in school easier. She felt that had it been recognised earlier, it would have made a huge difference in terms of dealing with her bereavement and mental health. Overall, there was a feeling that schools were ill-equipped to handle death despite many young people in the school being bereaved, and schools were also not perceived as being prepared to deal with self-harm.

For some young people, schools addressed the death on a superficial level, and did not follow up with them, or address subsequent problems such as declining academic performance. Several people felt schools did not have time to deal with them, given the hundreds of other pupils “behaving much worse” (Beth, father, cancer). Similarly, guidance teachers, school counsellors, and Child and Adolescent Mental Health Services were felt to be overrun with referrals, which sometimes led to long waiting times for support or being declined a service altogether.

*If I'm just like not taking part, they didn't really care. They were just kind of like, okay, that's up to you. [...] It was like not kind of, why isn't she taking part? It was just like, well she isn't. [laughs] And I'm like, “No, no, no”. Guidance teacher just didn't do anything, like he literally got so many referrals. (Beth, father, cancer)*

Thus, young people identified that a lack of resources may be a reason for unsatisfactory experiences of support. Likewise, staff turnover was also highlighted as a barrier for support. For instance, after being approached by a teacher over concerns about her self-harm and

encouraged to reach out for help if she ever needed, Beth recalled that her teacher then shortly after resigned from their role; she felt this was something she could not deal with. Another young person, Sophie (mother, embolism), recalled that she was meant to have a social worker who then also resigned, and this gap was never filled by a replacement.

In addition to a lack of resources within schools or external services and high staff turnover, another barrier was the lack of status of being “in” school. Schools were seen as a hub of guidance and support, as well as a gatekeeper to additional services. When some young people had finished school, this meant that they could no longer access the services they had been benefitting from, such as school counsellors. Others reflected on needing to just rely on family and friends as they were no longer in school.

Other participants reported poor experiences of support from professionals and services due to the unsuitable format or type of support available. This included a number of young people being offered medication when they did not necessarily want it. Another individual reflected on a poor experience of family group therapy, which she felt went badly because her sister and mother and her all had very different personalities, which created a difficult dynamic in the group session (Erica, father, alcoholism). Having unstructured counselling sessions was also felt to be unhelpful for Alice, who believed she needed something more guided like CBT rather than just “sitting there to talk about [her] feelings” (Alice, grandfather, heart attack). Erica and Sophie described particularly unhelpful experiences with professionals:

*One of [the doctors] told me to try essential oils. One of them told me to invest in lavender candles. One of them told me to listen to soothing music, which is just an insult when you're in the middle of a panic attack. [...] The other doctors were nice, but they all offered me medication, which- propranolol, my beta-blocker, I'm fine with that. But I didn't want to take anti-depressants. I've always been afraid of them for*

*some reason. And that was what they would offer me, and then they would offer me counselling, and I'd say, "No, I don't like counselling." And then they would say, "What do you want me to do then?" So [laughs] I would just awkwardly leave. One of them offered me prayers once, which was a nice thought, but a bit disconcerting.*  
(Erica, father, alcoholism)

*[An art therapist] made me re-enact my mum's death with these- you know like the pipe cleaners? [...] She made me make characters and we'd like re-enact it. I remember thinking, "This is stupid". I was like, I didn't- it was just making me worse. Like my aunt said that she was making- she was just making me worse rather than better.* (Sophie, mother, embolism)

Difficulties building relationships and rapport with professionals was also a barrier to support. Relatedly, issues surrounding confidentiality (such as the potential that professionals might disclose information to others about their mental health issues or self-harm) strongly impacted willingness to engage with support, either to deal with the death or with self-harm or mental health difficulties. Some favoured speaking to mental health professionals within a clinical setting over their family, as they felt it was easier to open up to them (Kali, grandmother, heart attack). Others mentioned speaking to their pets because they would "keep it to [themselves]" and not "grass" on them (Erica, father, alcoholism). Similarly, it was felt that speaking to strangers or people external to the school was easier, as they were people on the outside. This included the experience of opening up during these interviews.

*I've told you more about my friend's lives than I have with my parent or anyone else. But, I'm only telling you because, well, I'm never gonna see you again, [laughs] you don't know their names, you don't know who I hang out with.* (Shepard, father, seizure)

*It [counselling service] was someone external to the school, so it made me feel a bit more comfortable, in, it was like a strange way, 'cause I knew that it was sort of a stranger that I was talking to, that it felt like no way it would come back. You know, and like, so that's why maybe it was quite comfortable to talk to. (Mark, mother, cancer)*

Fear of consequences of opening up to professionals, such as following disclosures of self-harm, inhibited young people from seeking help at times.

*I also don't know if I'd ever talk to any counsellors about [self-harm]. [Interviewer: Okay] 'Cause that's when they start to let people know and stuff. You know the... harm to yourself and others, any of that, so I just never told them. (Erica, father, alcoholism)*

This suggests that concerns around confidentiality play an important role in who (and to what extent) young people feel comfortable opening up to about their experiences, and as such can become a barrier to seeking support.

#### **7.3.4.3 Theme 3. Agency and Power.**

Experiences of agency and power shaped how young people approached death and bereavement. This included the ability to understand their own needs and advocate for themselves, dealing with gatekeepers to access support and information as well as being in control of the sharing of information, and grief literacy.

*Understanding own needs and self-advocacy.*

There were differences among participants in terms of whether they had learned effective ways of coping with their grief or stressful situations generally, as discussed under Theme 1, and consequently become more resilient. Some reflected on helpful strategies they

had learned, such as going for walks, having showers, looking after their personal hygiene, cleaning their room, and speaking to others. Having gone through their experiences, they felt they were prepared to deal with subsequent stressors. For instance, Alice described the “escape mechanisms” she now draws on:

*If I'm going, “This is too much”, like there, I have escape mechanisms set in place. So I feel like I know myself a lot more now. And that way I can... deal with things. And I know that there will be points where I go down that rabbit hole again, but my recovery time is getting shorter and shorter each time. The more I handle myself, the more I know how to deal with it. (Alice, grandfather, heart attack)*

Those who had come to understand their own needs were able to advocate for themselves in relation to the support they were given. One participant reflected on being able to fight for what she needed from the school following the death of her grandfather after a stroke, as she had discovered what was helpful for her from her experiences of dealing with her father's loss:

*I was like, “This is what I need from the school”, ‘cause by that point I knew. So we sat down and I was like, “Right I need a bit of leniency in terms of the upcoming assignments I have because at the moment my family's in a whirlwind. We just lost like this rock”, because like, after my dad died my grandpa did become like my rock. (Beth, father, cancer; grandfather, stroke)*

Self-advocacy was also brought up in terms of funerals, where some participants chose to play a more active role than initially given. For instance, Shepard (father, seizure) spoke about his mother wanting him to go into the back room after the funeral service, but instead he chose to stand in the receiving line and greet guests; he later reflected positively about this, expressing surprise at how many people attended. This suggests that there is a link

between self-awareness and learning from past experiences, and the ability to advocate for oneself.

Another important aspect of agency related to young people's choice in telling others about the death. For example, some participants spoke about the need to be open and not hide the fact that someone important to them had died; for instance, Sophie described how she would tell new friends shortly after meeting them that her parent was dead, in order not to keep it a secret or keep people wondering. Other participants spoke about choosing to keep the death to themselves so as not to face awkward or uncomfortable interactions with others, as "people will start treating you differently" (Hans, father, cancer) when death is mentioned. Yet, several young people reflected on occasions where they involuntarily had to tell others about the death without having a choice in this, or where they faced unwanted attention from peers following family members' disclosures. In the case of Kristen, she recalled having to stand up in front of her class and tell them her father had died, which she later felt angry about. Likewise, Erica's teacher announced to her class that her father had died while she was absent and without her consent, and she also received unwanted condolences after her sister posted on social media about it. She acknowledged that the teacher likely thought it would "break the ice" and avoid her having to tell people, but she would have preferred to not tell anybody in the first instance, and was not given that right. This suggests that choice and control in relation to sharing information is an important aspect of dealing with the loss.

#### *Gatekeepers and access to information.*

Parents and teachers were frequently identified by participants as gatekeepers in terms of access to help, support and information. In some cases, these individuals were seen as helpful in referring young people to services, including those within the school as well as external organisations. In other cases, participants felt they were not listened to, or their

maturity was not recognised, and therefore they missed out on supports which could have been beneficial. For example, one participant struggled with not being allowed to see her grandfather in hospital before he died, and not being permitted to attend all parts of the funeral despite feeling that “all [she] wanted was to be there” with her family. As a result, she felt cheated on a sense of closure and described struggling with this feeling of powerlessness for some time:

*I feel like there's this whole perception as a society that like children don't know what they want, and I'm like- or know what they need- and I feel like that's painting all kids with the same brush because there are kids that are more emotionally mature and you have to be able to recognise that. And if they're telling you something, it's for a reason. And I feel like that needs to be listened to. (Alice, grandfather, heart attack)*

This contrasted with others who were given a choice in attending the funeral or playing a more active role (such as giving the eulogy, or welcoming guests as noted in the previous subtheme), and benefited from these experiences.

Knowledge about the death itself was also held (or withheld) by others. In cases where there was openness and honesty from others (e.g., parents, medical staff) about the death, this was seen as helpful by young people who knew specific details about the person's death. Such honesty tended to be more common when the death was due to illness, like cancer or stroke, rather than more sudden losses like suicide or murder. At these times, participants felt that they were not kept “in the dark” (Mark, mother, cancer), which made it easier to deal with. Mark described how his parents:

*... wouldn't keep us in the dark about anything. They just thought, why bother? So, even for my little sister, they still like, made sure she knew what was going on. [...] I suppose I like being in the know rather than if it- if we were kept in the dark, then her death would have been harder to deal with. (Mark, mother, cancer)*

Being told helpful information about the death also included being given age-appropriate information. Natalie (stroke, grandmother) reflected on understanding what was happening when her grandmother was unwell, but also noted that her parents provided different information to her younger brother at the time, who was less aware of what was going on. Similarly, at the age of six, Kristen had an understanding that her father “basically went to sleep and didn’t wake up” but in later years became more curious:

*I think when I was like eleven or twelve, I started asking a bit more about my dad, ‘cause I’d found some things, like I found all his camping equipment, ‘cause I’ve always been quite into camping. So I just started talking to my mum about him. And then, then I’d be like, “What actually happened? Like, was it just cancer, or what was it?” And then she’d like go into detail [...] It was like nice to learn more, because I mean he wasn’t in my life for long, so the only thing I kind of get from was like photos and like the few memories I had, and just talking to my mum and his dad about it.*

(Kristen, father, cancer)

In contrast, Sophie was present at the time of her mother’s death, and although she witnessed the event, had limited comprehension at the age of three:

*They never really told me. I just- you know I remembered. I found out recently the real cause but, I remember I asked my aunt’s mum, my aunt, and she turned around and she said that a vein – now this was not how she died – a vein in her wrist had snapped. So like, I grew up with like a phobia of wrists. Like I can’t have people touch my wrists now. (Sophie, mother, embolism)*

Other young people described being given limited or inaccurate details about the death due to family conflict, cause of death (e.g., suicides where suicide notes were not left, or murders which resulted in legal proceedings), or general lack of openness within the family. This was felt to be challenging especially in cases where the young people wished to

know more, and requests for information were denied. Rebecca reflected on asking her parents for information about the court case following her cousin's death, and was met with false stories about their whereabouts and excuses for their telephones being off, which she knew to be untrue. In other cases, further details about the death unwittingly became revealed in overheard conversations, or death certificates which were later seen that contradicted initial accounts, which subsequently led to feelings of frustration and tension within families. In this way, adults were portrayed as gatekeepers of information which restricted young people's ability to understand what was happening when someone was dying or had died.

*Grief literacy.*

Knowledge about grief and bereavement varied between participants. Some interviewees who appeared to have fewer difficulties coping with the death tended to be more aware of the process of grief, which included having a vocabulary for their grief reactions, acknowledging that there was no specific endpoint, recognising that they would still be dealing with the loss in the future, and that needs may vary over time. For instance, Mark reflected on his place in his grief journey after receiving support from a counselling service:

*I feel like I said most of what I was thinking at that time. So, I feel like had [the counselling service lasted longer], I wouldn't have had much more to say, but maybe if I took a break and then did it again, because just like, obviously after time passing, your feelings change... (Mark, mother, cancer)*

Likewise, Shepard recognised that it was not one specific service or person that would have solved all their problems. Others acknowledged that the support they were receiving (either in relation to their loss or mental health more generally) was a process.

*It [counselling] was really difficult at first. Like it was just me going and sitting crying for like an hour, and I came out so emotionally drained. So that's why I stopped it*

*'cause I was like, this isn't doing anything. But then I realised it's a process and it did like eventually end. Like I could go and sit and talk for like an hour and not cry.*

(Beth, father, cancer; grandfather, stroke)

At other times, participants did not recognise that unique approaches might be beneficial for different individuals. One interviewee described a situation in which pupils in his school would often leave support sessions with a teacher crying afterwards, which he saw as a very negative thing, and felt the teacher was doing their job poorly. Indeed, it was notable that several interviewees brought up crying, and reflected on the fact that they had avoided crying (e.g., during the funeral or at school) as something to be very proud of. A small number of participants who cried during the interviews also tended to apologise for expressing their emotions, suggesting that expressing their sadness in relation to the death and being emotionally vulnerable to others was something to be avoided. This may reflect stigma in relation to grief.

#### **7.3.4.4 Theme 4. Personal Growth and Perspectives.**

This theme relates to personal growth and perspectives following the loss of their significant person. It covers the drive to help others, new realisations or views on life and death and maintaining connections, and changing roles and responsibilities as a result of the death.

##### *Helping others.*

The willingness to help others who have been through hardship, particularly in relation to another death but also mental health difficulties or negative life events, came up on a number of occasions. Young people reported having a sense of worth from having responsibilities to others, such as assisting friends with suicide attempts or from becoming

homeless, or being there to help other family members with practical and emotional support following the death of their relative. A number of young people described helping others in need as a “good grounding mechanism” (Shepard, father, seizure), and listening to others gave them a bit of perspective on their own situation. While reflecting on helping a fellow peer who had been through similar issues as he, Hans remembers:

*I'm just thinking to myself, you know, some of the things that he's gone through are a lot worse than what I've gone through, you know. And it just kind of makes you appreciate, even though it's a bad situation, it makes you appreciate what you have more. And, and the fact that you get to help other people as well at the same time. It just really helped me. And I think that was just a really good way of coping. 'Cause now I- I... yeah I have this experience behind me. And because of it I know how I could help others. And I did. [...] And it really helped. (Hans, father, cancer)*

Willingness to help others in relation to grief also arose in the form of offering a listening ear to friends whose family members were dying, going around schools to educate them on how young people experience bereavement, and the willingness to volunteer for this research so as to help other young people in the future through the findings. By being able to help others, young people were able to see that they were not alone in experiencing hardship, and benefited from connecting with other people.

#### *New perspectives on life and death.*

Developing new perspectives on life and death, as well as an appreciation for life, were discussed by many young people. Several spoke about recognising that “people aren’t here forever” (Mark, mother, cancer), and therefore we shouldn’t waste time, and appreciate those in our lives. Alice noted that she used to be scared to talk about death, but having gone

through the experience gave her a new appreciation for those around her, rather than dwelling on the negatives.

*I feel like I was scared to talk about things like death before. And I feel like having that experience, like, it's also made me appreciate the people around me, because before, like he was a- at age thirteen he was the first person I'd lost. And it gave me that thing of, people aren't gonna be there forever and you have to like embrace that, embrace them, and not focus on the negatives. 'Cause yeah you're gonna have points where you don't get on with people, but it's, find a way to push through your differences because you want to make the most of the time that you have with that person. And I feel like I didn't have, I didn't have that appreciation before. (Alice, grandfather, heart attack)*

In this way, the death could be seen as the impetus for building connections with the living.

Hans also reflected on becoming conscious about the fact that life is not always “happy ever after” like in films, and there is a grim side to existence (Hans, father, cancer).

Other interviewees reflected on differences between them and their friends who are thrown by the “slightest inconvenience”; instead, they feel they are able to be more forward thinking and realise “what’s the worst that can happen?” (Kristen, father, cancer). Beth (father, cancer; grandfather, stroke) described that she used to stress a lot and plan everything in advance, but now feels she has a new outlook on life as “there’s no point in stressing the small things”, and she takes every day as it comes and appreciates the little things in life.

Another interviewee described going through a very difficult time after the death but coming out a better person because of it.

Having experienced multiple losses (also covered under Theme 1) also gave some participants a realisation that death can happen at any time to anyone. Some find it easier to deal with now as they see that death is something that happens. One person reflected on the

fact that any death can be devastating, whether it is of a young or older person and regardless of the circumstances.

*[My cousin] died, and it was... it was a strange death, 'cause you n- you never met him. Erm, and then after that, to have my dad die, it was a very different death. [...]* neither of them I was intensely close to, but for very different reasons, it made things feel a lot more unfair I think. 'Cause it was very one-halved. I don't even know if it was two weeks, if it was that long. And the- that's thrown the family completely out anyway. (Erica, reflecting on father's death to alcoholism and cousin's stillbirth)

A motivation to make their loved one proud or honour their memory was also discussed. This was in relation to how they should continue living their lives and work through their grief, such as not "wallowing around" after the death and supporting each other (Alice, grandfather, heart attack), and imagining what their loved ones would think and say if they saw them struggling after the death. This motivation to "push through" (Mark, mother, cancer) for the person who died was cited by a number of participants, and could be seen as a way of maintaining connections with the deceased.

Similarly related to maintaining connections, losing someone important for many meant losing a role model or guide in life. This was described in terms of valuing the kind of person they were, as some participants spoke of the kind and accepting nature of their significant person, and hoped that they would live up to that:

*I used to really like look up to her. She's like really accepting of everyone, and like, no matter colour, race, gender, like or, if they were gay or lesbian or whatever, so... and she's always been a role model in my life, like to look up to, just to be that accepting of everyone else. Just taking half an ounce of that would be like pretty good.* (Mark, mother, cancer)

This was also described in terms of worries about the future and lacking someone to guide them through hardship:

*Your dad's supposed to be your guide basically. Erm, he's, he's the navigator of your vessel not the captain. And it's just like a lot of things where you think, "Oh I'm stuck, what do I do? What should I do? What should I have done?" Uh, you know, and you feel as if you're supposed to have your dad there. But, you have the misfortune of him just not being there. (Hans, father, cancer)*

The idea of continuing bonds was expressed by this participant, who continued to feel that his father was still there with him, and picturing what he would say and do if he were still alive.

Death as the impetus for change also came up in terms of setting new goals and priorities. One participant noted that before the death, she did not realise what was going on around her and what was important; after the death, she made a point to make a bigger effort in relationships, deleting social media apps and "things that don't matter" (Rebecca, cousin, murder), in order to spend more time with family and friends. Another person spoke about the death driving them to become a better person overall, including being more friendly and respectful to others, and engage in activities that help others. Hans (father, cancer) spoke about becoming "aware of like the whole fragility" of life, and saw that ultimately as a positive thing, as he now jumps on opportunities to do exciting things when presented to him, as "you never really know what can happen next".

When asked about their views on suicide, some participants were not sure how to answer; for these individuals, this was generally because they had not thought much about it, or did not have direct experience with suicide. One interviewee who had been bereaved by suicide did not know how they felt about it, although it is worth noting that the death had happened only eight months prior. Other participants spoke about how their views on suicide had changed since the significant death they experienced. Some reflected that they had never

thought about suicide until their loss, and struggled with suicidal thoughts and attempts after feeling so low in their grief. Many therefore voiced empathy and understanding for people who are suicidal, and stressed the need for individuals to receive adequate support in these circumstances.

Other interviewees felt that suicide is not (or no longer) an option for them after having experienced their own bereavement. For some, this was because they realised that life is too short, and while there are things that cannot be changed, there are so many good things in life. Others reflected on the ripple effect of suicide on those left behind, and therefore while empathising with suicidal individuals, would not wish to put that 'burden' on others.

*In the end it's like the people around them it affects. It affects a lot more, like people, like your close family, friends, and then further out. Yeah. It affects a lot of people.*

(Rebecca, cousin, murder)

Relatedly, another interviewee whose father had died by cancer felt that suicide is a selfish option because dying was not a choice his father had.

*He didn't want to die. And it's not him that's missing his life, it's us. [...] And when he died I'm thinking like, alright if you take your own life, you know you're just, you're just causing that pain to others as well. And obviously, you get there, you know, you didn't have enough help of your own, and it's a bit too late for you. But like, there's other people that you have to think about, because they're, they're the people you're leaving behind. (Hans, father, cancer)*

Several participants spoke about knowing someone else who had been bereaved closely by suicide, such as family friends or relatives of their friends, and reflected on witnessing the destructive impact of the death on those people. This included problems coping with the death for a very long time, becoming closed off, struggling with not having been able to say goodbye, and feeling suicidal themselves. Thus, while not all young people

had direct experience with suicide, many were nevertheless aware of the impact it could have on loved ones and the wider community.

*Changing roles and responsibilities.*

For several participants, the death meant that they needed to take on new tasks to make up for their significant person missing. This included playing a more active role around the household, like helping out with cleaning or food preparation or raising animals. These experiences taught them to become more independent and grounded, and they recognised that they lived very different lives to their friends of the same age.

Given that a number of interviewees had recently moved to university and gained new flatmates, several reflected on noticing differences between them and their peers who had not learned life skills at a younger age. Consequently, they had an appreciation for the roles and responsibilities they had been forced to take up at an earlier age, as these had prepared them for later life.

*You had to take a lot more responsibility. Uhm, which I actually really value now, because you can tell people who have never had to step up, and like always had stuff done for them, whereas like I've you know I can cook, I can clean, I can do my washing. I know people who don't know how to use an iron or have never never even cooked soup for themselves. So it's taught me a lot more life skills especially, just kind of having to... not necessarily grow up faster, but just having to learn faster, if that makes sense? (Kristen, father, cancer)*

### **7.3.5 Experiences of Self-Harm**

Six participants (46.15%) reported lifetime engagement in self-harm behaviours, all having first occurred over a year ago. Of these, one participant (16.67%) self-harmed only

once, and the rest on multiple occasions. Half of the young people recalled their first episode of self-harm occurring before the bereavement, and half afterwards. The main motives cited were wanting to punish oneself ( $n = 5$ , 83.33%) and wanting to get relief from a terrible state of mind ( $n = 5$ , 83.33%), followed by wanting to die ( $n = 3$ , 50%), wanting to show how desperate they were feeling ( $n = 1$ , 16.67%), and wanting to get their own back on someone ( $n = 1$ , 16.67%). No participants reported wanting to frighten someone, wanting to find out whether someone really loved them, or wanting to get some attention as motives for their self-harm. The most frequent methods included cutting ( $n = 6$ , 100%), scratching oneself ( $n = 5$ , 83.33%), punching oneself or a wall/window ( $n = 4$ , 66.67%), or banging one's head ( $n = 3$ , 50%).

Eight participants (61.54%) reported previous thoughts of self-harm, of which one (12.5%) occurred before the bereavement, four (50%) after, and three (37.5%) both before and after. Eight participants (61.54%) also reported thoughts of suicide, with one (12.5%) occurring before the bereavement, six (75%) after, and one (12.5%) both before and after.

### ***7.3.6 Findings from CaTS Data***

Eight participants chose to complete the CaTS task to reflect on their experiences with self-harm behaviours ( $n = 5$ ) or thoughts of self-harm or suicide ( $n = 3$ ). The items and frequency of cards endorsed for both the first and most recent episodes of self-harm ideation/enactment are presented in Tables 7.2 and 7.3, respectively. The ratings of confidence in the accuracy of their recollections regarding the first episode of self-harm ranged from 2 to 5 (with lower scores indicating lower confidence), and the most recent episode ranged from a rating of 3 to 5. The data presented below depicts the wide range of thoughts, feelings, events, behaviours, services and supports, and outcomes which participants experienced, and certain patterns are worth highlighting.

**Table 7.2**

*CaTS Items Endorsed by Participants Completing the CaTS Task for Their First Episode of Self-Harm, and Frequencies According to Timestamp*

Frequency	Item	6 months before	1 month before	1 week before	1 day before	1 hour before	I self- harmed	Afterward s
7	I felt depressed and sad	2	1	2	1	0	1	0
6	I felt like a burden on people	0	1	2	0	1	1	1
6	I felt numb	2	0	3	0	0	0	1
6	I had access to the means to hurt myself*	1	1	0	0	2	2	0
6	I hated myself	3	0	1	1	0	1	0
6	I was angry	0	2	1	2	1	0	0
6	I was not able to sleep*	1	0	2	1	0	1	1
5	I felt exhausted	1	1	0	1	1	1	0
5	I felt I could not escape from feelings or situations	0	0	1	0	2	2	0
5	I felt trapped	1	0	1	0	1	2	0
5	I felt very anxious	3	0	1	0	0	1	0
5	I felt very hopeless about the future	0	1	1	1	0	2	0
5	I isolated myself from others*	2	1	1	0	0	0	1
4	I could not tell anyone how I was feeling	1	0	0	1	0	0	2
4	I could not think of anything else to do	0	1	0	0	2	1	0
4	I felt disgusting	0	1	1	1	0	0	1
4	I felt like I did not belong	2	0	1	1	0	0	0
4	I had a problem at school	1	2	0	0	0	0	1
4	I was having nightmares	1	0	3	0	0	0	0
4	I was not afraid of death*	1	1	0	0	0	0	2
4	I was very agitated and restless	0	0	1	0	2	1	0
4	Someone close to me died	3	0	0	0	0	0	1
4	The mental pain was unbearable	0	0	0	1	2	1	0
3	I am insensitive to pain*	1	0	0	0	2	0	0

3	I did it on impulse without planning	0	0	0	0	1	2	0
3	I did not know what I was feeling	0	1	0	1	1	0	0
3	I felt ignored	0	2	0	1	0	0	0
3	I felt rejected	1	1	1	0	0	0	0
3	I felt worthless	1	0	1	0	1	0	0
3	I had an argument with my parent/caregiver	0	0	2	1	0	0	0
3	I struggled to make decisions	0	1	2	0	0	0	0
3	I talked to a friend which helped	0	1	0	0	0	0	2
3	I talked to a teacher which did not help	1	1	0	0	0	0	1
3	I wanted to die	0	1	0	0	2	0	0
3	I went to counselling which did not help	1	1	0	0	0	0	1
3	There was no one to turn to for help	1	1	1	0	0	0	0
2	I depended on a caregiver for help and support	0	0	0	0	0	0	2
2	I felt ashamed	0	0	0	0	1	0	1
2	I felt better after self-harm	0	0	0	0	0	0	2
2	I felt defeated	0	0	0	0	1	0	1
2	I felt energized	0	0	0	0	0	1	1
2	I felt I could change for the better in the future	1	0	0	0	0	0	1
2	I felt I could not change for the better in the future	1	0	1	0	0	0	0
2	I felt I would not be able to change myself in the future	1	0	0	1	0	0	0
2	I felt worse after self-harm	0	0	0	0	0	0	2
2	I had flashbacks about something bad that happened	0	1	1	0	0	0	0
2	I knew someone who was self-harming	1	1	0	0	0	0	0
2	I planned it carefully	0	0	2	0	0	0	0
2	I read about self-harm on the internet	1	0	0	0	0	0	1
2	I received help and support from a user-led service	0	1	1	0	0	0	0
2	I received therapy which did not help	0	0	0	0	0	0	2
2	I saw my GP which did not help	0	0	0	1	0	0	1
2	I saw my GP which helped	1	0	0	0	0	0	1
2	I was bullied	2	0	0	0	0	0	0
2	I was having problems in a close relationship	1	0	1	0	0	0	0

2	I went to counselling which helped	1	0	0	0	0	0	1
2	My home life was not very good	0	1	1	0	0	0	0
2	No one listened to me or took me seriously	1	0	0	0	1	0	0
2	Someone listened to me and took me seriously	1	0	0	0	0	0	1
1	Bullied, but they didn't realise	0	1	0	0	0	0	0
1	I am used to pain*	1	0	0	0	0	0	0
1	I could not solve a problem I faced	0	0	0	0	0	1	0
1	I could not trust anyone	0	1	0	0	0	0	0
1	I did other things to hurt myself (starved myself, drank too much)	0	0	1	0	0	0	0
1	I discussed self-harm in a forum on the internet	0	0	0	0	0	0	1
1	I felt abandoned	0	1	0	0	0	0	0
1	I felt hopeful about the future	1	0	0	0	0	0	0
1	I felt humiliated	0	1	0	0	0	0	0
1	I felt no different after self-harm	0	0	0	0	0	0	1
1	I got into trouble at school/work	0	0	0	0	0	0	1
1	I had an argument with my boyfriend/girlfriend	0	0	0	1	0	0	0
1	I had an argument with my friend	0	0	1	0	0	0	0
1	I moved to a different home	1	0	0	0	0	0	0
1	I moved to a different school	0	0	0	0	0	0	1
1	I phoned a helpline which did not help	0	1	0	0	0	0	0
1	I phoned a helpline which helped	0	0	0	0	0	0	1
1	I read a self-help book - it did not help	0	0	0	0	0	0	1
1	I received no support from caregivers	0	1	0	0	0	0	0
1	I received therapy which helped	0	0	0	0	0	0	1
1	I talked to a boyfriend/girlfriend which helped	0	0	0	0	0	0	1
1	I talked to a mental health support worker which did not help	0	1	0	0	0	0	0
1	I talked to a mental health support worker which helped	1	0	0	0	0	0	0
1	I talked to a social worker which did not help	1	0	0	0	0	0	0
1	I talked to a teacher which helped	1	0	0	0	0	0	0

1	I talked to my caregivers which did not help	0	0	0	0	0	0	1
1	I talked to my caregivers which helped	0	0	0	0	0	0	1
1	I thought I can't do it	0	0	0	0	0	1	0
1	I wanted to kill myself	0	1	0	0	0	0	0
1	I was drinking alcohol	0	0	0	1	0	0	0
1	I was drunk	0	0	0	0	1	0	0
1	Lots of people I knew were doing it	1	0	0	0	0	0	0
1	Self-harm stopped me from killing myself	0	0	0	0	0	0	1
1	Someone close to me left me	1	0	0	0	0	0	0
1	Someone I knew killed themselves	1	0	0	0	0	0	0

*Note.* \*Items with an asterisk denote cards which one participant felt applied across all timepoints. In order to avoid duplicate counting, they have only been counted in the table once, at the first timepoint they occurred (6 months before).

**Table 7.3**

*CaTS Items Endorsed by Participants Completing the CaTS Task for Their Most Recent Episode of Self-Harm, and Frequencies According to Timestamp*

Frequency	Item	6 months before	1 month before	1 week before	1 day before	1 hour before	I self- harmed	Afterward s
7	I felt depressed and sad	1	1	1	1	1	2	0
5	I felt better after self-harm	0	0	0	0	0	0	5
5	I felt I could not escape from feelings or situations	0	0	1	0	3	1	0
5	I felt numb	1	0	0	1	1	0	2
5	I had access to the means to hurt myself*	2	0	0	1	1	1	0
5	I isolated myself from others*	1	1	1	1	1	0	0
5	I was not able to sleep*	1	1	0	2	1	0	0
4	I could not think of anything else to do	0	0	0	0	3	1	0
4	I did it on impulse without planning	0	0	0	0	2	2	0
4	I felt exhausted	0	0	1	0	1	1	1
4	I felt trapped	0	0	1	0	2	1	0
4	I was angry	0	0	0	1	2	0	1
4	I was not afraid of death*	1	1	0	0	0	0	2
4	I was very agitated and restless	0	1	0	0	3	0	0
3	I could not tell anyone how I was feeling	1	0	0	0	1	0	1
3	I did not know what I was feeling	0	0	0	0	3	0	0
3	I felt defeated	0	0	0	0	0	2	1
3	I felt like a burden on people	0	0	0	0	3	0	0
3	I felt very anxious	0	0	1	0	1	1	0
3	I felt very hopeless about the future	0	0	0	1	1	1	0
3	I had flashbacks about something bad that happened	0	1	1	0	1	0	0
3	I hated myself	0	0	1	1	0	1	0
3	I wanted to die	0	0	0	0	2	1	0
2	I am insensitive to pain*	1	0	0	0	0	1	0

2	I could not solve a problem I faced	0	0	1	0	0	1	0
2	I could not trust anyone	0	0	0	1	0	0	1
2	I felt abandoned	0	1	0	0	1	0	0
2	I felt ashamed	0	0	0	0	0	1	1
2	I felt I could change for the better in the future	0	0	0	0	0	0	2
2	I felt ignored	0	0	1	0	1	0	0
2	I felt like I did not belong	0	0	1	0	1	0	0
2	I felt worthless	0	0	0	0	0	2	0
2	I had an argument with my boyfriend/girlfriend	0	0	0	1	1	0	0
2	I had an argument with my friend	0	0	1	0	1	0	0
2	I had an argument with my parent/caregiver	0	0	0	1	1	0	0
2	I knew someone who was self-harming	1	0	1	0	0	0	0
2	I struggled to make decisions	1	1	0	0	0	0	0
2	I talked to a boyfriend/girlfriend which helped	0	1	0	0	0	0	1
2	I talked to a friend which helped	0	0	0	0	0	0	2
2	I talked to a teacher which helped	1	0	0	0	0	0	1
2	I was drinking alcohol	0	0	0	2	0	0	0
2	I was having problems in a close relationship	0	1	1	0	0	0	0
2	Self-harm stopped me from killing myself	0	0	0	0	0	0	2
2	Someone close to me died	2	0	0	0	0	0	0
2	The mental pain was unbearable	0	0	0	0	0	2	0
2	There was no one to turn to for help	1	0	0	1	0	0	0
1	I am used to pain*	1	0	0	0	0	0	0
1	I depended on a caregiver for help and support	0	0	0	0	0	0	1
1	I did other things to hurt myself (starved myself, drank too much)	0	1	0	0	0	0	0
1	I felt energized	0	0	0	0	0	1	0
1	I felt hopeful about the future	0	0	0	0	0	0	1
1	I felt humiliated	0	0	0	0	1	0	0
1	I felt no different after self-harm	0	0	0	0	0	0	1
1	I felt rejected	0	0	0	0	1	0	0
1	I felt worse after self-harm	0	0	0	0	0	0	1

1	I got into trouble at school/work	1	0	0	0	0	0	0
1	I had a problem at school	0	0	1	0	0	0	0
1	I had a problem at work	0	1	0	0	0	0	0
1	I had unprotected sex	1	0	0	0	0	0	0
1	I moved to a different school	0	1	0	0	0	0	0
1	I phoned a helpline which did not help	0	1	0	0	0	0	0
1	I phoned a helpline which helped	0	0	0	0	0	0	1
1	I planned it carefully	0	0	0	1	0	0	0
1	I received therapy which did not help	0	0	1	0	0	0	0
1	I talked to a mental health support worker which helped	1	0	0	0	0	0	0
1	I talked to my caregivers which helped	0	0	0	0	0	0	1
1	I thought I can't do it	0	0	0	0	0	1	0
1	I wanted to kill myself	0	0	0	0	1	0	0
1	I was drunk	0	0	0	0	1	0	0
1	I was having nightmares	0	0	0	1	0	0	0
1	I was high on drugs	1	0	0	0	0	0	0
1	I was rejected by my parents	1	0	0	0	0	0	0
1	I was taking illegal drugs	1	0	0	0	0	0	0
1	I went to counselling which did not help	0	0	1	0	0	0	0
1	I went to counselling which helped	0	0	1	0	0	0	0
1	My home life was not very good	0	1	0	0	0	0	0
1	Somebody listened to me and took me seriously	0	0	0	0	0	0	1
1	Someone I knew tried to kill themselves	0	1	0	0	0	0	0
1	Someone listened to me and took me seriously	0	1	0	0	0	0	0

*Note.* \*Items with an asterisk denote cards which one participant felt applied across all timepoints. In order to avoid duplicate counting, they have only been counted in the table once, at the first timepoint they occurred (6 months before).

There was considerable overlap in the most common experiences that preceded first and most recent episodes of self-harm thoughts or actions. The most frequently selected card in both episodes (endorsed by seven of eight participants) was “I felt depressed and sad”. Feeling numb, having access to the means to hurt oneself, difficulties sleeping, and feelings of not being able to escape from feelings or situations were endorsed by at least five participants at both events.

Many of the items that were commonly endorsed mapped onto predictions from the IMV model, although the limited data makes conclusions on this tentative. For instance, the item “Someone close to me died” was most often reported 6 months prior to self-harm, and “I moved to a different home/school” were also reported between 1-6 months prior, suggesting their position as distal (pre-motivational phase) risk factors. Similarly, items that represented motivational phase factors (e.g., “I felt defeated”, “I felt I could not escape from feelings or situations”, “I felt trapped”) tended to be reported in the medium term prior to self-harm. There were more mixed experiences with items that corresponded to volitional phase factors (e.g., “I had access to the means to hurt myself”, “I was not afraid of death”, “I knew someone who was self-harming”), which were reported across various timepoints and did not necessarily represent proximal predictors of self-harm. Given the small sample size participating in the CaTS task, additional formal statistical analysis of these data to explore this further was not possible.

It is worth noting that there was also some overlap with the themes generated as part of the thematic analysis. The most frequently endorsed items concerned feelings (e.g., “I felt depressed and sad”) and behaviours (e.g., “I isolated myself from others”), and showed connections with the varied *emotional, psychological and physical responses* (subtheme) and *coping skills* (subtheme) depicted under Theme 1, *Reactions to Death*. A number of ACEs were selected as relevant cards, including experiences of bullying, alcohol use (though in this

case was reported by participants), and exposure to suicide or self-harm, as discussed under the subtheme *Adjusting to a new 'normal'*. Similarly, dealing with additional losses such as moving to a different home or school also tended to precede self-harm. This supports the finding that young people experience a lot of loss and adversity, and in some people, this can result in self-injurious outcomes. Also discussed under Theme 1 were visual memories or experiences which were impactful to participants, and this came up in the CaTS as experiences of flashbacks prior to self-harm. The endorsed cards both at first and most recent episodes of self-harm reflected a number of formal and informal relationships (aligning with Theme 2, *Systems of support*) which young people turned to for support (e.g., a friend, parent/caregiver, boyfriend/girlfriend, teacher, helpline, therapy, counsellor, support worker). Whether these were felt to be helpful or unhelpful varied from person to person, and they were also employed at various timepoints prior to and after the episode of self-harm. Similarly, participants selected cards relating to feeling isolated, not belonging, ignored, and abandoned, which relates to the subtheme of grieving *alone vs not alone*.

#### **7.4 Discussion**

This study sought to investigate how adolescents understand and experience bereavement and examine the factors which help or hinder the process of dealing with a death. A further aim was to explore the key factors involved in the development of self-injurious thoughts and behaviours (for both first and most recent episodes) in order to understand the temporal dynamics of self-harm. Analysis of data from 13 semi-structured interviews with young people generated four key themes illustrating features of their bereavement: reactions to death, systems of support, agency and power, and personal growth and perspectives. Overall, there were many similarities across participants regardless of the circumstances of the death. Particularly relevant to their bereavement experiences were: their

relationships with people before and after the death; the specific coping skills employed; the support systems around them; and the background factors that set up the broader environment for their bereavement. The card sorting task further revealed that young people report a wide array of thoughts, feelings, events, behaviours, services and supports, and outcomes leading up to their first ever episode of self-harm, and their most recent episode. Tentative evidence of overlap between frequently selected cards and IMV model predictions was observed. The following four sections (7.4.1 to 7.4.4) summarise each of the four main themes from the interviews, and compare the findings to the wider literature on adolescents.

#### ***7.4.1 Interpreting Theme 1. Reactions to Death***

The first theme, reactions to death, concerned the varied grief responses and reactions in the time leading up to and following the event. The findings here support the wider literature indicating that adolescents experience a wide range of mental and physical health outcomes as well as social impacts relating to their grief, which have an effect on functioning (Brent et al., 2009; Feigelman et al., 2016; Luecken, 2008; Melhem et al., 2008; Pfeffer et al., 2000; Revet et al., 2018; Stikkelbroek et al., 2016; Wilcox et al., 2010). Experiences such as suicidal ideation or behaviours were reported by several participants regardless of the circumstances surrounding the death, similar to other studies which found no differences in suicidal ideation among adolescents bereaved by different causes (Kölves et al., 2020). Humour was also a frequent strategy for dealing with loss in findings by Brewer and Sparkes (2011b), where young people used humour to deal with difficult emotions, build rapport, and facilitate discussions of serious topics. The wider literature also highlights relief as a reaction following the loss of a loved one, particularly deaths by suicide (Sveen & Walby, 2008), although this was also evident in this study among those who witnessed their loved ones' deteriorating health, or whose relationships had broken down regardless of cause of death.

Dissimilar to recent findings by Ludik and Greeff (2020), none of the young people interviewed here discussed religion as a desired personal coping mechanism or a means to continue their bond with their loved one. This may be a reflection of the lower rate of religious affiliations reported among Scottish individuals compared to South Africans, where the respective study was based (Schoeman, 2017; Scottish Public Health Observatory, 2020a).

Many participants spoke about dealing with the emotions relating to the death, while also welcoming distractions from the loss in terms of practical matters or taking a break from the bereavement through hobbies and school, work or friends. These findings are in line with Stroebe and Schut's (1999, 2010) Dual Process Model (DPM; as discussed in Chapter 2) which describes grief as a continuous process of oscillation between loss-oriented and restoration-oriented modes. That is, actively turning towards grief and dealing with emotional responses, as well as attending to practical tasks to reorient oneself in a changed world. Oscillation between these modes is important for adaptive coping with the death and integrating grief (Stroebe & Schut, 2010), as reflected in the narratives here. The DPM was originally developed to understand adult experiences (namely, following the loss of a partner; Stroebe & Schut, 2010), though there is some early evidence of its applicability with children and adolescent populations (e.g., Blueford et al., 2021; Patterson et al., 2021; Stokes et al., 1999). Nevertheless, further research is needed to determine whether the model can be appropriately applied to understanding the grief experiences of adolescents (Bylund-Grenklo et al., 2021), and this study adds to the growing evidence base in this regard.

Relatedly, Stroebe and Schut (2016) discuss the concept of 'overload' in their more recent publication, which describes the situation in which individuals feel they have more to deal with (e.g., activities, events, stressors) than what they are able to cope with. In the current study, participants described multiple stressors that "piled up on top of each other"

(Mark, mother, cancer), either through death or other life events. Adverse childhood experiences (including bullying, experiences of the care system, violence within the family, use of alcohol, or family members in the criminal justice system) and exposure to self-harm or suicidal behaviour among family or friends, for instance, were prevalent. Several interviewees reflected on ambiguous (nondeath) losses which they felt complicated dealing with their main bereavement. As noted by Knight and Gitterman (2019), people experiencing ambiguous losses often fail to have their grief recognised by others, and thus may experience disenfranchised grief as they are denied opportunities to grieve and have that grief validated. Ambiguous losses can challenge a person's resilience and result in difficulties moving forward. Vaswani (2015) describes a "catalogue of losses" that some young people face, which not only includes loss through bereavement, but also ambiguous losses such as loss of futures, relationships, status, and stability. These additional experiences add to the burden of bereavement and may complicate the process of coping with the death. A similar concept has been described as a "cascade of events" instigated by the death (Christ, 2000). Indeed, a converging body of research suggests that bereavement can be especially distressing for those who have experienced multiple deaths or adverse life events (Akerman & Statham, 2014), which may serve as mediators or moderators of the relation between experiencing a death and mental health outcomes (Luecken, 2008; Stikkelbroek et al., 2016). Ultimately, this suggests that the difficulties some young people in this study faced may be understood in the context of overload from dealing with a cascade of stressors.

#### ***7.4.2 Interpreting Theme 2. Systems of Support***

The theme of systems of support related to the broader social context of grief, also highlighted as being central in several studies and models of bereavement support (e.g., Akerman & Statham, 2014; Jones et al., 2015; Rodgers & DuBois, 2018; Walsh et al., 2008).

For the most part, grief was not experienced in isolation, despite some participants feeling that they were alone. Depending on the individuals and structures young people found themselves in, they received different levels and types of support (sometimes at different times in their journey). Some relied heavily on themselves, choosing to grieve alone while recognising other people they could fall back on. Other young people struggled to identify alternative sources of support and were faced to deal with their loss by themselves. This reflects findings by Andriessen, Lobb, et al. (2019) of high self-reliance among young people in dealing with death, although in the current study this was not always a desired approach. Family was also a major influence in how young people coped in this study, both in terms of being affected by the grief of family members, but also learning how to grieve or cope generally with adversity, such that certain ways of coping were 'inherited'. This reflects findings from the wider literature showing that family systems play a role in influencing each other's grief processes (Rodgers & DuBois, 2018). Other studies emphasise the importance of open and honest communication within families to provide an outlet for expressing difficult emotions and thoughts and being understood (Ludik & Greeff, 2020; Weber et al., 2019). Similarly, findings here showed that close friends helped to bring about a perception of 'normality' and a break from the focus on grief, while reactions of others who were less understanding or empathetic made the experience more challenging. This echoes findings from Ludik and Greeff (2020), who note the importance of friends as a distraction and source of emotional support, as well as LaFreniere and Cain (2015b), who found that young people face a range of responses from peers following the death which can include empathy and understanding, but also being rejected or treated differently. In the latter study, young people reported a strong desire to be perceived as 'normal' and return to some form of 'normal' life, and as a consequence chose not to discuss death with their peers to avoid awkward or uncomfortable interactions. Similar experiences were recalled by participants here.

Furthermore, Bartik et al. (2013a) found that young people experienced difficulty relating to peers after the death as they often do not understand or know how to respond to them, which can also impact future relationships. Relatedly, in a study by Brewer and Sparkes (2011b), young people reflected that meeting and connecting with others who had gone through a similar experience of bereavement was of particular value. Thus, on the one hand while adolescents wanted to return to some sense of ‘normality’ among their peers, they also felt different given their experiences with death. This tension relates to work by Paul (2019), who found that children both want to talk about death while at the same time want to avoid death, in a concept termed ‘death ambivalence’. In the current study, adolescents wanted to feel ‘normal’ while at the same time desiring opportunities to acknowledge their grief. This could be dependent upon the individuals around them as well as the spaces they inhabited, and suggests that death can be present and absent in the everyday lives of adolescents.

The wider community also had a role in shaping experiences, through interactions with schools, external agencies, and community members. Features that facilitated experiences of bereavement included specific individuals, openness and communication, available resources, and perceptions concerning confidentiality. Where those aspects failed, participants struggled to access or benefit from wider support. This is in line with findings from Andriessen, Lobb, et al. (2019), who found that adolescents were at times unaware of the formal supports available to them, and often relied on others (e.g., parents) for referrals to such services. In the current study, young people commonly relied on school teachers for referrals and access to services. Andriessen, Lobb, et al. (2019) also found that barriers to accessing formal support included a lack of knowledge about services, over-reliance on oneself, and positive relationships with professionals, while perceptions of confidentiality were important. Similar experiences were conveyed here, with adolescents at times being unaware of available supports and reported difficulties building and maintaining relationships

with staff members for various reasons. They also avoided accessing support due to the fear of being judged or facing consequences following disclosures. This suggests that participants in this study may see death and mental health as stigmatised, and the fear of consequences (perhaps as a young person with limited agency/power in these circumstances) restricts help seeking. In addition, young people in the study by Andriessen, Lobb, et al. (2019) reported experiences of inadequate support from schools, ranging from passive, unavailable, or insufficient support, to staff who were perceived at times to be unprepared and unqualified to deal with death, while at the same time highlighting specific teachers as having a positive impact on their experiences. This finding is comparable to those identified by other researchers (Dyregrov et al., 1999; Ribbens McCarthy & Jessop, 2004; Rowling & Holland, 2000), and similar views were raised by interviewees in the current study.

Overall, grief was facilitated (or hindered) through different levels of support, from the individual themselves, to their wider family and peers, and finally external agencies and communities in which they were based. Like many prominent models of bereavement support, this study demonstrates the variability in individual responses to grief, and acknowledges that the need for services and supports may vary over time and from person to person (Walsh et al., 2008). Akerman and Statham (2014) advocate a tiered approach to bereavement support which ranges from providing general information to help normalise grief and strengthen coping strategies, to more individualised or therapeutic programmes for those with additional difficulties, and specialist interventions for those with clinical levels of distress. Similarly, Jones et al. (2015) suggest a pyramid of bereavement care which illustrates the incremental levels of support needed by all or most children, some, and few, and acknowledges the individual circumstances (e.g., developmental stages) and family context that shape experiences. In the current study, narratives reflected these tiered needs for support, although not all young people had access to different levels of intervention despite

the desire for extra input (e.g., owing to blocked access to mental health or bereavement services, lack of acknowledgement about the death from schools, or limited family and peer social support).

#### ***7.4.3 Interpreting Theme 3. Agency and Power***

The theme of agency and power concerned young people's understanding of their own needs, and consequently being able to advocate for themselves in matters concerning their bereavement. Gatekeepers played a role in access (or barriers) to support, activities, and information. Grief literacy also varied among participants, with differing levels of understanding about and willingness to discuss death. Information was an important aspect, in terms of knowing details about the death as well as being in charge of relaying that information to others, reflecting findings from the wider bereavement literature around supporting bereaved young people (Akerman & Statham, 2014; Jones et al., 2015; Turner, 2017). Paul (2019) argues that while children want to talk about their experiences of bereavement, they face many barriers within their social structures that inhibit this process. As noted above, young people in their study felt that death is present but often avoided (e.g., unacknowledged within family and school systems), and felt they were given limited access to information about the death (e.g., censored details, adults as gatekeepers of information), which then hinders their ability to open up about their loss. In the current study, barriers to discussing death included schools not acknowledging the event and adults as gatekeepers, which impacted young people's ability to connect with their experiences. Similarly, grief literacy and avoidance of emotions and sadness are themes brought up by participants in various studies (Paul, 2019; Rodgers & DuBois, 2018). Participants who wanted to avoid expressing emotions, in particular crying (either during the interview or more generally in

relation to the bereavement), may reflect the stigma associated with bereavement, as reported in other research (Pitman et al., 2018).

The concepts of agency and power also relate to findings by Lytje (2017), who identified that perceptions of control were important to bereaved adolescents, reflective of the literature on adolescence more broadly. This includes control over when to discuss the death, sharing details about the death (perhaps related to worries of being seen as different if people are aware), and control in terms of dealing with their grief in their own way and taking care of their own needs, which were also described by interviewees here.

#### ***7.4.4 Interpreting Theme 4. Personal Growth and Perspectives***

The deaths had a significant impact on young people who reflected on personal growth and perspectives changing as a result of their experiences. Many developed a sense of responsibility or desire to help others, gained new views on life and death, and adapted to new roles and responsibilities following the loss of their loved one. These findings support literature showing that finding meaning in the loss and in one's new life plays an important role in adaptation to a death (Alves et al., 2018; Bartik et al., 2013a). As suggested by the Meaning of Reconstruction and Loss Framework (Gillies & Neimeyer, 2006), individuals will seek to make sense of the death, find benefits, and go through a process of identity change in order to reconstruct their narratives challenged by the loss. This process of meaning reconstruction is related to personal growth, and in some cases complicated grief symptoms (Alves et al., 2018; Neimeyer, 2011). Indeed, the finding that death had positive impacts for some young people in terms of a new appreciation for life, improvement in relationships, increased maturity and agency, as well as recognising that suicide is no longer an option for them, also mirrors findings from Andriessen, Mowll, et al. (2018). Brewer and Sparkes (2011b) further found that young people report positive outcomes following a death

including a sense of gratitude and a new appreciation for life, as well as altruism and empathy for others, which supports findings here. Finally, this theme can be related to Tonkin's (1996) model of grief, which suggests that as time progresses, one's grief will not necessarily diminish but life will begin to grow and build around it. This model can be applied to how some participants spoke about adapting to the changes brought about by their loss, and understanding that grief will always be there but will not remain the centre of their lives as they adapted their expectations and acknowledged the lack of a timeline attached to grief.

#### ***7.4.5 Strengths and Limitations***

Thematic analysis following the method outlined by Braun and Clarke (2006, 2013) was selected due to its theoretical flexibility and potential for analysing rich and complex data in a detailed and meaningful way. Braun and Clarke's steps of analysis were followed throughout, and the researcher undertook a constant process of reflexivity and documenting the decisions made. This included critically reflecting on the researcher's positionality, including how the researcher's background and assumptions shaped the research design, conduct and findings, and keeping a record of these thoughts and observations during different stages of the study (as described in Chapter 4.6). Furthermore, quality checks of a proportion of the data with a second reviewer (SP) confirmed similar overarching findings and specific coding decisions through a comparison of a sample of the data. While two transcripts were double-coded and discussed in detail, a 100% rate of independent coding would have strengthened the validity of the findings.

This study also provided a space for young people to share their stories about bereavement and generated a rich dataset to analyse these narratives. Feedback from participants was that they generally enjoyed the process of taking part, and were glad to be able to contribute to the research and educate others on what young people go through. For

some, taking part allowed them to recognise the people they had in their lives, and others reported enjoying the space to speak about their loved one despite feeling emotional at times. No participants experienced significant distress that raised concerns during the interview, and as indicated by the VAS, involvement in the study did not result in significant changes in mood. This echoes findings by previous research with participants performing similar tasks (Biddle et al., 2013; Townsend et al., 2016).

Nonetheless, the study is not without limitations. It is worth noting that the young people who chose to take part in this research consisted of a small, self-selected sample of older adolescents (all were aged 16-18), who were for the most part accessing higher education, based in larger urban areas of the country, bereaved by a family member, and slightly overrepresented by females. Therefore, the narratives covered here may not necessarily reflect the experiences of all young people in Scotland who have lost someone important to death. Furthermore, the average age of people who took part in this study ( $M = 17.7$  years,  $SD = 0.6$ ) was slightly older than in the previous quantitative studies of this PhD (Study 1  $M = 15.4$ ,  $SD = 0.8$ ; Study 2  $M = 13.2$ ,  $SD = 1.5$ ), suggesting that the experiences of these adolescents may differ, given that developmental age is known to impact understandings of death (Robin & Omar, 2014).

Despite having conversations in advance of meeting face-to-face, all interviews were carried out during the first and only meeting with participants, which did not always provide ample opportunity to build rapport in advance, and may therefore have restricted young people's willingness to share their narratives. In addition, as discussed in Section 7.2.6, despite many ethical considerations and precautions taken, unfortunately two participants attended the interview without strictly meeting the time since death criterion of six months. However, it was felt that the judgement to proceed with the interview upon balancing the risks and benefits was the correct decision at the time. Reflecting further on this, a few

individuals who expressed an interest in taking part in the study early on were unable to because of having been bereaved within the last 6-months. The exclusion criterium of 6-months was based on recommendations from previous research (Dyregrov et al., 2011) suggesting that participation should optimally be at least 6 months after the death, but the authors of this study also acknowledged that several factors may influence the experience of research participation (e.g., relationship to person who died, gender, type of death). Given the positive experience of interview with the two participants who took part in this study while not meeting this criterium, there may be grounds to revise the recommendation of the 6-month exclusion period for research participation following a death.

Lastly, while the interview guide was piloted and developed based on findings from Study 2, it is worth acknowledging the risk of Type I and Type II error that was present in the quantitative study. Limiting the interview guide to exploring these significant findings only might have constrained the approach of the current study by not looking beyond these few constructs of interest. An alternative could have been to explore all the constructs measured in Study 2 in the interview guide, to ensure the discussions were not restricted by the potential false positive or false negative conclusions from Study 2.

Although it would have been of interest to investigate the impact of different causes of death more closely, disruptions due to the COVID-19 pandemic precluded further recruitment of additional young people bereaved by suicide or other sudden or unnatural deaths, thereby limiting conclusions about the impact of specific causes of death. Similarly, while it was felt that data saturation had been reached with regards to exploring the general experience of bereavement (and not specific causes of death like suicide), there are questions about whether saturation was reached with regards to other experiences as well, such as going into care or losing people of different kinship relationships. This would be worth exploring in future research using larger and more diverse samples. The disruption caused by COVID-19

also impacted analyses which could be applied to the card sorting task data, given that smaller sample did not allow for the quantitative analyses originally planned. Despite this, the study provided a valuable opportunity for young people to share their stories, and generated important insights into how different life circumstances shape bereavement and self-harm experiences among young people.

#### **7.4.6 Future Research**

Following from these points, future research should aim to recruit a broader sample and age range of adolescents to capture the experiences of those groups underrepresented here. Existing research suggests that developmental stage is relevant in understanding death, the nature of grief, and one's support needs (Nader & Salloum, 2014; Revet et al., 2018), and, thus, the views of younger adolescents should be investigated more closely. In addition, young people bereaved under circumstances, such as during the COVID-19 pandemic, may report very different experiences. Significantly higher numbers of people have been bereaved since the start of the pandemic, and the restrictions in place to limit the spread of the virus and social distancing have had implications on opportunities to express and share grief, and be supported by friends, family and the wider community as well as organised supports (National Bereavement Alliance & Childhood Bereavement Network, 2020). Preliminary findings illustrate that people bereaved due to COVID-19 show higher symptom levels of prolonged grief disorder compared to bereavements by natural causes (Eisma et al., 2021), yet any bereavement during this time has the potential to be more distressing.

Although tentative findings can be stated from the data on the impact of living in a tight-knit community (e.g., the community coming together to support the family, everybody knowing everyone's business), further research with a larger sample of young people based in wider geographical areas would be beneficial. Research suggests that youth living in rural

communities lack access to mental health and suicide prevention services (Graves et al., 2020), and given the disparities in suicidal ideation and attempts among rural versus urban youth (Goldman-Mellor et al., 2018), further attention should be directed at understanding bereavement experiences within these settings. In addition, all main bereavements discussed in these interviews concerned those of family members. Research on bereavement after the loss of a friend may provide alternative insights, as a friend or peer's death during adolescence is more likely to be that of a young person they can relate to, and more likely to be sudden and unexpected, and therefore disrupt the development of their identity and self-esteem (Robin & Omar, 2014). Finally, while the CaTS data presented some intriguing preliminary findings on the factors preceding and following an episode of self-harm, additional data with a larger sample is necessary to fully explore the pathways to self-harm among a bereaved group of adolescents.

#### ***7.4.7 Implications***

There were variations in the kind of supports that young people desired or sought. Nevertheless, the consensus was that young people wanted their bereavement to be acknowledged by their teachers and wider community, the benefits of knowing what support was available should it be needed, and a say in the type of support they received. Different individuals preferred different approaches at times, so perhaps a signal from young people is needed about how they would prefer to be approached. As participants often reported a lack of understanding from their friends and peers, who were often unsure of how to approach them following the death, it is recommended that young people more widely should be offered advice on communicating with their bereaved peers. This should be through both increased curricular teaching on death and grief to understand this experience, but also

specific guidance being made available on supporting someone who is bereaved. Based on the findings from this study, this guidance for young people should include:

- how to talk to someone who is bereaved and acknowledging the death
- helpful or unhelpful things to say and do
- understanding the grieving process and grief reactions
- understanding that different people may approach death in different ways and require varying support; asking the person what they want
- destigmatising grief and the expression of emotions, including awareness of suicide and challenging stigmatising attitudes
- suggestions on providing support in the longer term
- finding and accessing further help

A related resource exists for individuals (of all ages) supporting someone who is bereaved or affected by suicide (Roper & Pitman, 2018), and guidance is available for parents and education practitioners who support bereaved children and young people (Child Bereavement UK, 2020; Education Scotland, 2022; YoungMinds, 2022). Yet, very little is aimed specifically at the friends (children and adolescents) of young people to know how to help them when they are bereaved. Given the feedback from participants in this study, there would be value in creating a specific resource for young people who wish to help but might not know how. Further work to develop such guidance is strongly recommended.

As discussed above, several national and international guidelines recommend tiered approaches to bereavement support (e.g., Akerman & Statham, 2014; Jones et al., 2015; Millar et al., 2020; Morgan et al., 2016; National Institute for Clinical Excellence, 2004; Walsh et al., 2008). These suggest that the majority of individuals receive general information about death (e.g., death and grief education), with a proportion requiring additional organised supports (e.g., from voluntary sector or health and social care services),

and a minority necessitating specialist services due to experiencing more complex grief. Schools play an important role in death and grief education and support for young people. Despite this, schools were perceived as reacting poorly to the death or failing to support young people in appropriate ways. Findings from a Scottish study found that teachers report low confidence and awareness in responding to death, which may result in a reluctance to discuss death and a barrier to young people receiving help (McManus & Paul, 2019). In Scotland, education policy stresses the need for education and support for young people around mental health and wellbeing, which includes learning on how to cope with change and loss (Education Scotland, 2021). Yet, research shows that only 10% of teachers in the United Kingdom have received training in relation to bereavement (Child Bereavement UK, 2018), and further calls for compulsory death education in Scottish schools have recently been made (Scottish Parliament, 2020). A whole school approach to death, dying, and bereavement identifies developing staff confidence and skills, school bereavement policies, and death education as priorities moving forward (Glasgow City Council, 2013). Based on the findings from this study, specific recommendations for schools include:

- Acknowledging the death with pupils and their families, and giving young people choice in how and whether they wish to inform other pupils and teachers about the death, with consideration of personal, cultural or religious beliefs.
- Communicating with young people (and their families) about how best to support them, both before and following the death. Additional support may include opportunities to talk and take time out, safe spaces at school, named staff members to speak with, accommodations to timetables or deadlines, facilitating peer support, and revisiting support needs at a later time (including in the event of future deaths or anniversaries). Also recognising individual

preferences to not discuss the death and keep the school a ‘safe place’ away from grief.

- Building staff capacity to provide support to young people (and themselves) by increasing training on death, dying, and bereavement. This includes understanding grief reactions at different ages and developmental stages, following different causes or circumstances of death, recognising when challenges arise, and knowing when to refer on to external agencies for specialised support (and establishing connections with other agencies).
- Developing a dedicated bereavement policy to guide staff on preparing for and responding to death or bereavements within the school, or external deaths which may impact the school community (such as those of former pupils or staff members, major incidents or suicide clusters). Also identifying a single point of contact for the pupil and family to liaise with, and to relay updates to other staff to avoid the pupil having to repeat information multiple times.
- Pushing for national curricula to include specific teaching on death and grief. Current national guidance on coping with “change” and “loss” is ambiguous and may be interpreted inconsistently.

Aoun et al. (2012), Aoun et al. (2018), as well as Paul and Vaswani (2020) have stressed the need for public health approaches to death and bereavement, where issues which affect the population are deemed best tackled through community models of support in conjunction with more specialist services where needed. By not relying solely on professional services (which are not always indicated for people experiencing bereavement), services and supports can be developed within the community and are offered depending on the individual’s needs and risks. This ensures that the appropriate supports can reach the people who need them most at the right time, and thus reduces the morbidity and mortality

associated with bereavement. Such approaches recognise the value of local community networks in supporting bereaved people, and stress the need to facilitate partnerships between formal and informal services (Aoun et al., 2018).

Research also suggests that increasing mental health literacy among adolescents may improve help-seeking in relation to bereavement (Andriessen, Lobb, et al., 2019), and interventions aimed at tackling loneliness and isolation (Robinaugh et al., 2014), and improving parenting skills, communication, and parental mental health (Akerman & Statham, 2014) may also be particularly effective for youth. Given the role of friends and peers in shaping experiences in this study, the value of peer support should also not be overlooked in developing support for young people. This is supported by evidence in the wider literature of the value of peer support (Bartone et al., 2017; Dopp & Cain, 2012; LaFreniere & Cain, 2015a). For this reason, the guidance for young people described above would be of particular of benefit.

This study provides support for aspects of key bereavement theories that describe the experience of loss, such as the Dual Process Model (Stroebe & Schut, 1999, 2010) and the Meaning of Reconstruction and Loss Framework (Gillies & Neimeyer, 2006), and demonstrates their applicability to adolescent age groups. Although limited conclusions can be made regarding suicide theory from the current study, certain frameworks may be useful in understanding general adverse outcomes of loss (e.g., general distress or mental health difficulties). Specifically, the IMV model can be useful to illustrate the factors which increase vulnerability more generally following a death. Although the interviews did not specifically focus on understanding the outcome of self-harm (as this was not relevant in all cases), the model may still help explain why some young people adapt to or cope better with loss than others. For instance, background vulnerability factors including mental health problems or adverse childhood experiences may set the broader context of dealing with loss. Factors such

as coping skills, ruminative processes, feelings of not belonging, resilience and social support may impact isolation and adjustment following a bereavement. Exposure to suicide, depicted within the volitional phase of the IMV model, was also common among interviewees, and helped shape views and attitudes towards death. Ultimately, the model can aid in understanding how poor outcomes arise if young people lack skills and wider systems to guide them through their bereavement.

Overall, findings from this research provide insight into the experiences of young people who have experienced a bereavement, and present the narratives of 13 adolescents surrounding experiences of loss and support. Interviews revealed that various factors play a role in shaping experiences, which cover personal and social/structural issues that help or hinder young people from adapting to and coping with their grief. Common themes among participants support the notion that death should be acknowledged, and young people want to play a role in shaping their experiences. Proactive approaches to dealing with death and support can facilitate help seeking and improve outcomes for young people struggling to cope after a death. Specific recommendations on developing guidance for young people and schools to support bereaved children and young people have been made.

#### ***7.4.8 Reflective Note***

The interview and CaTS data from this study have been presented together within a single chapter for this thesis, given the overlapping sample of participants, and based on the original plan to collect additional interview and card-sorting task data for further analysis. However, due to the difficulties caused by COVID-19 affecting participant recruitment, the original plans for analysis were not feasible. It is acknowledged that not all young people who were interviewed experienced self-harm or thought about it, and therefore, the data from the interviews are not necessarily connected to the CaTS data. For this reason, there are plans

to submit these papers to journals separately – one as a qualitative interview study, and another concerning the preliminary CaTS data – acknowledging their differing focus.

#### **7.4.9 Chapter Summary**

##### **Key points for this chapter:**

- Analysis of qualitative interviews with 13 young people identified four key themes relevant to the experience of losing someone important to death: reactions to death, systems of support, agency and power, and personal growth and perspectives.
- Adolescents reported a range of experiences regardless of the specific circumstances of the death. Important factors in shaping the bereavement included the relationships they had with others, available coping skills, support systems in place, and background vulnerability or protective factors.
- Adolescents want to have the death acknowledged, and be heard in terms of what supports and services they receive; yet, barriers exist which hinder this.
- Several factors are identified as important in leading to self-harm among a sample of bereaved adolescents, with additional data needed to explore these sequences further.

##### **Questions for subsequent chapters:**

- What do the findings of this thesis suggest about how young people experience bereavement, either by suicide or more generally?
- What are the implications of these findings on theory, research, practice, and policy?
- What knowledge has this thesis added to the literature?

##### **Next steps:**

- Chapter 8 will summarise the key findings of this PhD in the context of the wider literature, and discuss the implications on theory, research, practice (and postvention), and policy. It will also consider some of the challenges of research in this area, as well

ethical considerations, measurement issues, and finally the importance and contribution of this programme of research to the wider literature base.

## Chapter 8 Discussion

This chapter provides a summary of the overall story that runs through this thesis. Two overarching aims were set at the start; first, to provide a better understanding of the experiences of adolescents who have experienced a bereavement by suicide or other causes. Second, to explore factors related to the development of adverse outcomes among young people, including self-harm. Following a systematic review of the literature which identified areas necessitating further exploration, a mixed methods programme of investigation was undertaken to answer the remaining questions of this thesis. Specifically, a quantitative cross-sectional secondary analysis of existing data, a quantitative longitudinal schools study, and a mixed methods interview study explored experiences of bereavement among adolescent-aged young people. This chapter begins by summarising the background information and key results from each of these studies in terms of how they addressed the research questions posed at the start and contributed new knowledge to this growing field of research. Findings are then discussed in the context of how they situate within the wider literature base. Implications for research and theory, practice, and policy are discussed. A consideration of the overall strengths and limitations of the work is provided throughout this chapter, as are suggestions for future research in light of the thesis findings.

### 8.1 Summary of Background and Key Findings

Adolescents experience a range of outcomes following bereavement, which can include increased risk of suicide and self-harm. As covered in Chapter 2, research suggests that suicide bereavement in particular may be linked with an elevated risk of self-injurious outcomes (e.g., Andriessen et al., 2016; Hill et al., 2020; Hua et al., 2019; Pitman et al., 2014), though whether this applies to adolescent age groups and exceeds the risk compared to

other types of deaths has remained unclear. There is a particular lack of research based in Scotland, where findings suggest that self-harm is a common experience among adolescents (O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012; O'Connor, Rasmussen, Miles, et al., 2009; Quigley et al., 2017b; Russell et al., 2018).

Previous systematic reviews (Andriessen et al., 2016; Hill et al., 2020; Hua et al., 2019; Kuramoto et al., 2009; Pitman et al., 2014; Sveen & Walby, 2008) have documented the existing knowledge on the relationship between suicide bereavement versus other losses and subsequent suicidal or self-harming thoughts and behaviours. However, gaps have remained in the understanding of adolescent experiences specifically, and how the experience of suicide loss compares with other bereaved control groups. In order to tackle the overarching aim of better understanding of the experiences of adolescents bereaved by different causes, a systematic review was conducted to explore the current evidence in this area and reported in Chapter 3. Its findings suggested that, while suicide bereavement appears to be strongly associated with excess suicide mortality, the evidence of the impact on hospital-treated or community-occurring self-harm is mixed, and the evidence concerning suicidal ideation is sparse. Moreover, several factors continue to be highlighted as important in experiencing a bereavement, including circumstances surrounding the death and personal relationships. Overall, research with adolescents, from representative community samples, using validated measurement tools, grounded in theory, and employing longitudinal and qualitative approaches, was found to be lacking from the literature.

These areas were thus explored throughout this PhD in a series of quantitative (cross-sectional and longitudinal) schools studies as well as a mixed methods interview study, grounded within the IMV model of Suicidal Behaviour (O'Connor, 2011; O'Connor et al., 2016; O'Connor & Kirtley, 2018). These studies addressed five research questions posed at the end of the systematic review, concerning:

- (1) the prevalence of bereavement by suicide or other modes of death among Scottish secondary school adolescents
- (2) the relationship between bereavement and SSHTBs cross-sectionally
- (3) the relationship between bereavement and SSHTBs longitudinally
- (4) the role of established psychosocial variables implicated in the IMV model and the wider bereavement literature in the development of self-harm ideation or enactment
- (5) the lived experiences of young people who have been bereaved by someone significant, and the factors which help and hinder the process of dealing with a loss.

Study 1 (Chapter 5) provided a quantitative cross-sectional analysis of an existing schools dataset with 2,008 participants from Scottish secondary schools, to address Research Questions 1 and 2. Almost 8% of adolescents reported knowing someone who had died by suicide, and a further 58% had reported a non-suicide death, suggesting bereavement is a common experience among young people in the country. Self-harm was also found to be prevalent, with 14% of the sample reporting previous engagement in self-harm, and 6% experiencing self-harm ideation. The first hypothesis tested the prediction (based on the pre-motivational phase of the IMV model) that ideation and enactment groups would differ from controls, but not each other, on the experience of any bereavement. Results showed that bereavement status was in fact not a significant predictor of self-harm outcome. Secondly, bereavement by suicide, but not non-suicide deaths, was expected to differentiate ideation and enactment groups from each other and from controls. As hypothesised, suicide loss was associated with self-harm group membership, with those reporting a history of self-harm enactment more likely to report exposure to suicide than controls with no history of SSHTBs. Experiencing a non-suicide death did not differentiate groups. This study provided valuable information about the relationship between exposure to death and self-harm

ideation/enactment, yet was limited by the lack of detailed information about the deaths experienced, and details on factors which may intensify or buffer the impact of a death.

To explore these remaining issues and address Research Questions 1-4, Study 2 (Chapter 6) was a quantitative longitudinal schools study with 185 secondary school pupils, aimed at directly testing the IMV model by concentrating on relevant known risk and protective factors thought to be important from the bereavement and self-harm literature. Study 2 found that 11% of adolescents at baseline reported having experienced the suicide death of someone they knew, and 62% had experienced a non-suicide death of a family member or someone else close, with prevalence rates closely reflecting those of Study 1. SSHTBs were also common among the sample, with 21% of adolescents at baseline reporting previous engagement in self-harm behaviours, and 24% reporting self-harm ideation. As predicted by the hypotheses grounded in the IMV model, negative life events, maladaptive coping, family social support, endorsing glorifying/normalising beliefs about suicide, and exposure to family self-harm were factors significantly associated with self-harm group membership (control, ideation, or enactment groups) cross-sectionally, in the expected directions. Longitudinally, holding stigmatising beliefs about suicide, glorifying/normalising beliefs about suicide, and self-harm ideation at baseline significantly predicted self-harm group membership over a 6-month period. Bereavement status (as a suggested pre-motivational phase variable) did not predict self-harm group membership, nor did it predict levels of defeat or entrapment, either at baseline or at follow-up. Similarly, suicide loss was not a predictor of outcomes at either time point. Findings provide some support for the validity of the IMV model, though it is worth considering that issues with recruitment resulting in a limited sample size may have impacted the ability to detect group differences if they existed. Nevertheless, this study provided novel insights into the relationship between bereavement and self-harm among adolescents.

Questions remained at the end of Study 2 about the lived experiences of young people following a death, which could not be captured adequately through survey-based methods. In order to explore this further and address Research Question 5, a mixed methods interview study (Study 3; see Chapter 7) informed by the quantitative findings was conducted to gain a more in-depth understanding of the experiences of adolescents. It was of interest to explore the features of being a bereaved young person in Scotland, while considering whether the IMV model can be used as a framework to understand this life event. From 13 semi-structured interviews, four key themes were identified as representing the experience of bereavement: reactions to death, systems of support, agency and power, and personal growth and perspectives. A range of experiences were discussed by participants, which were not dictated by specific causes of death. Particularly salient factors in determining life after a death included relationships with others, coping skills, support systems in place, and background vulnerability or protective factors in young people's lives. Overall, participants wanted death to be acknowledged, and wanted a voice in the supports and services they received, although barriers existed which limited their ability to engage with these. A more in-depth look at experiences of self-harm among a subgroup of the sample was achieved through a card sorting task (CaTS), where eight participants with experience of SSHTBs reported on the circumstances and factors which preceded their past episodes of self-harm. Frequently cited experiences during both first and most recent episodes (e.g., feeling depressed and sad, feeling numb, having access to the means to hurt oneself, difficulties sleeping, and feelings of not being able to escape from feelings or situations) often overlapped with concepts within the IMV model. This suggests that the IMV model may be relevant to understand the lead up to first and most recent self-harm episodes, although additional data from a larger sample would help establish this further.

### **8.1.1 Key Findings & New Knowledge Contribution**

Collectively, these findings expand our understanding of adolescent bereavement experiences in several key ways. Firstly, somewhere between 66% and 74% of adolescents between the ages of 12 and 18 in Scotland may have experienced the loss of someone significant to them. This adds to the limited body of research from Scotland showing rates of bereavement among adolescents (supplementing findings from Paul & Vaswani, 2020). Exposure to loss by suicide is also not uncommon, although young people generally reflected on and recognised the impact of a multitude of types of deaths. Many adolescents were also found to engage in self-harm or suicidal thoughts and behaviours, confirming evidence on the prevalence of SSHTBs among Scottish youth.

Importantly, this thesis has demonstrated that the way in which adolescents experience a bereavement is not dictated solely by the specific cause of death (although the number of individuals bereaved by different causes in Study 3 was too low to compare specific causes of death). Rather, the events and environments shaping their lives and experiences preceding and following a death are particularly relevant. Adolescents were significantly impacted by negative events which had occurred in their lifetime, and their styles of coping, available social supports, and beliefs about topics like suicide shaped the way they approached self-harm – regardless of whether they had experienced a close loss within their lifetime. For those who were bereaved, these factors certainly shaped experiences following death, and adolescents reflected on how other people around them and the systems which they inhabited influenced their grief and impacted their own perceptions about life, loss, agency and power. This builds on what is known in the literature about the social context of bereavement, with loss being experienced both personally as well as in the context of other people (Ribbens McCarthy, 2006).

This thesis fills an important gap in the literature looking at adolescent experiences of loss through the lens of an ideation-to-action framework. A major limitation hampering progress in this area is that many studies have lacked a grounding in theory (Hua et al., 2020; Wenzel & Beck, 2008). One approach to make sense of the literature is through the application of theoretical models to understand outcomes, which was a notable strength of the studies within this thesis. It is now widely acknowledged that research in suicidology must look beyond the study of individual risk factors in isolation (Franklin et al., 2017; O'Connor, 2011; O'Connor & Kirtley, 2018). Theoretical frameworks are useful as they integrate findings across the literature to build a clearer picture of the multitude of factors which can lead to suicide, a complex behaviour resulting from a combination of biological, psychological, clinical, and sociocultural circumstances (O'Connor & Kirtley, 2018; O'Connor & Nock, 2014; Van Orden et al., 2010). Ideation-to-action frameworks have gained traction as they make a key distinction between factors related to the development of ideation from those related to behavioural intention (Klonsky et al., 2017; May & Klonsky, 2016; O'Connor et al., 2016). The IMV model, as a relatively new addition to the landscape, offers clear and testable hypotheses regarding constructs relevant to the development of SSHTBs. Despite the established link between non-fatal self-harm exposure and self-harm outcomes (Dhingra et al., 2015; Hargus et al., 2009; Mars et al., 2019a, 2019b; McMahon et al., 2013; O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009; Pitman et al., 2014), the specific link between experiencing a *death* by suicide and subsequent outcomes has remained under researched. Only one previous study (Hargus et al., 2009) was found which employed an ideation-to-action model to explore the association. Therefore, a major strength of studies in this area, and of this thesis specifically, is providing theory-based evidence in relation to how exposure to deaths and bereavement more generally sits within this integrated framework.

Furthermore, there has been a lack of studies testing the IMV model with the 12-18 year age range, and the framework has not been extensively applied using longitudinal and qualitative designs to understand the experiences of young people. Thus, a key strength of this research is the mixed methods approach taken. As noted in Chapter 4.1, suicidology has been dominated by quantitative (and particularly epidemiological) research. The research questions posed at the end of Chapter 3 suggested that a combination of quantitative and qualitative enquiry would be best suited to answering the research questions, as they concerned correlates of self-harm as well as lived experiences. In this manner, employing different methodologies offered an opportunity to gain a rich and comprehensive picture of the experience of bereavement among adolescents by combining the advantages of different study designs. In addition, each of the studies built upon the learning from the preceding chapters and addressed the gaps which had been identified. The series of studies developed for this thesis therefore contributes to the growing evidence testing the model with different populations and varied methods. Findings offer support for specific aspects of the IMV model in explaining pathways to self-harm among young people, suggesting that the model may be applicable to adolescents, and can be useful for predicting outcomes over time. Based on the data from community samples of adolescents gathered here, it is evident that bereavement and self-harm are complex issues, and approaches to understanding and supporting young people who have experienced loss must acknowledge the individual and multifaceted nature of their experiences.

## **8.2 Implications for Theory and Research**

### **8.2.1 *Suicide Theory and Research***

As mentioned in Section 8.1.1, theoretically informed enquiry of the link between exposure to deaths by suicide and subsequent outcomes has been lacking from the literature,

particularly among adolescent age groups, and the studies within this thesis are novel in their exploration of adolescent bereavement experiences through the lens of the IMV model.

According to this framework, exposure to death may represent a pre-motivational phase life event which increases background vulnerability to self-harm or suicidal behaviour. At the same time, exposure to suicide is explicitly described as a Volitional Moderator, facilitating the transition from thinking about suicide (or self-harm) to acting on one's thoughts (O'Connor, 2011; O'Connor & Kirtley, 2018). Both Studies 1 and Study 2 found that bereavement status (i.e., having experienced any death) was not associated with an increased vulnerability for SSHTBs, contrary to expectations.

Exposure to death was ascertained in both quantitative studies using the Life Events Checklist, which asked about individuals who had died within the young person's immediate family, someone else close, or a friend/family member's suicide. As such, whether these studies indeed measured *bereavement* or *exposure* to deaths is not necessarily clear, as noted in Chapters 5 and 6. It is possible that some participants had experienced a significant death not fitting within these kinship categories. Similarly, the relationships questioned here may not have represented *significant* losses for some young people. Going back to the work of Cerel et al. (2014) which focussed on suicide deaths, the impact of a death can be thought of as lying on a continuum, from exposure to long-term bereavement. Thus, simply being exposed to a death does not necessarily imply being deeply impacted.

As discussed in Chapters 5 and 6, the question of exposure versus bereavement is a complex one, with differing terminologies potentially reflecting varying degrees of emotional attachment and adjustment following a death. This may explain why bereavement status as measured here was not found to be a significant pre-motivational phase predictor. Study 3 asked participants to reflect on the death of someone *important to them*, and indeed several types of relationships, degrees of distress and levels of closeness were reflected on. This

suggests that the measure used in the analyses of Studies 1 and 2 may not have fully captured the experience of *bereavement*. Future research should consider alternative measurement tools to capture bereavement status, either by defining “bereavement” at the outset or being explicit that the questions concern the death of someone close or important to the individual (e.g., as defined by Stroebe et al., 2008). It should be noted that this was attempted in Study 2 through the use of the bereavement questions created for this study which asked about the death of “someone important”. However, as these questions asked participants to focus on only one individual whose death was felt to have affected them the most, this missed the opportunity to ask about additional deaths (including suicides) experienced, and the sample size reflecting on suicide losses from this question was inadequate to use these data as a predictor variable. In the future, measurement tools which are clear on their interpretation or definition of *bereavement* (and studies not solely asking about a single experience of loss) can provide further knowledge about how a significant death may have been understood and experienced.

Support for the concept of suicide bereavement as a volitional phase factor was mixed. As predicted, suicide loss was associated with self-harm group membership in Study 1 (such that individuals who had experienced a suicide loss were more likely to have engaged in self-harm than controls with no history of SSHTBs), and non-suicide bereavement was not. This offered support to previous studies showing evidence that suicide deaths are associated with SSHTBs (Cheng et al., 2014; Guldin et al., 2015; Kuramoto et al., 2013; Madge et al., 2011; Wilcox et al., 2010), as reported in Chapter 3. On the other hand, Study 2 found no such association, similar to another research study with young adults by Wetherall et al. (2018). It is possible that the inconsistent findings between Studies 1 and 2 stem from the divergent sample sizes, as Study 1 captured experiences from 2,008 participants while Study 2 included 185 participants at baseline. As discussed in Chapter 6, the number of participants

per analysis met the minimum sample size requirements for the statistical tests chosen; however, this may not have been sufficient to detect group differences, if they existed, in analyses where cell sizes were small. It is also worth noting that the demographic characteristics of participants across the studies differed. The mean age in Study 1 ( $M = 15.4$  years,  $SD = 0.8$ ) was slightly higher than in Study 2 ( $M = 13.2$  years at baseline,  $SD = 1.5$ ). It is known that developmental age can impact understandings of death (Robin & Omar, 2014), and experiences of self-harm increase gradually from age 12 onwards (Hawton, Hall, et al., 2003; Hawton, Saunders, et al., 2012), though much of the research on adolescents tends to focus on those aged 14 or over (Stallard et al., 2013). It may be that the significant findings from Study 1 reflect the higher prevalence of self-harm among a slightly older sample. For instance, Stallard et al. (2013) found that adolescents aged 13-14 were at significantly increased odds of developing self-harm thoughts and behaviours compared to those just one year group below them who were aged 12-13. Thus, the contrasting findings between Studies 1 and 2 may be explained by differences in how younger and older adolescents experience self-harm. Likewise, experiences of bereavement may differ between early (e.g., 12-14) and late (e.g., 15-17) adolescence (Robin & Omar, 2014), further accounting for the inconsistent study findings. This ultimately suggests the need for additional testing of the placement of suicide bereavement within ideation-to-action theories using a larger sample of adolescents of various ages, so that differences between younger and older youth can be disentangled. Should such differences exist, this would imply that strategies to tackle self-harm before it becomes established are necessary from a younger age, and potentially different approaches to supporting adolescents through bereavement are warranted depending on life stage.

Additional variables investigated in Study 2 provide further support for the utility of the IMV model as applied to adolescents. At baseline, experiencing a greater amount of negative life events differentiated the self-harm enactment group from control and ideation

groups, maladaptive coping and lower family social support differentiated controls from both ideation and enactment groups, and the enactment group were more likely to hold glorifying/normalising beliefs about suicide than the ideation group at baseline. Furthermore, exposure to family self-harm differentiated ideation from enactment groups, with those who self-harmed more likely to report this exposure. In longitudinal findings, the ideation group were less likely to report glorifying/normalising beliefs about suicide compared to controls, and more likely to report self-harm ideation at baseline. Additionally, the enactment group were less likely to hold stigmatising beliefs about suicide or glorifying/normalising beliefs about suicide, and more likely to have reported self-harm ideation at baseline, when compared to controls. These variables were investigated given their relevance to bereavement outcomes based on the wider literature, and the study hypotheses derived from their purported placement within the IMV model. These significant findings thus provide support for their inclusion within the model. However, the limited sample size of Study 2 precluded testing of moderation or mediation effects. Whether these factors influence the relationship between defeat and entrapment and self-harm outcomes (i.e., serve as Threat to Self Moderators or Motivational Moderators, as suggested by the model) requires further investigation.

Defeat and entrapment were key variables not to display an association with self-harm outcomes multivariately, however, both were significant univariate predictors of self-harm group at baseline. It may be that defeat and entrapment were only predictive of self-harm univariately because of their associations with other factors which were found to be significant, and may not have independent associations with the outcome variable (Gracely, 2014). Given the small sample size achieved in this study, additional research with a larger group of participants would be important to examine the indirect effects of these variables on self-harm. Small samples may be appropriate to detect large effect sizes, but not sufficient

when factors are not highly associated with the outcome variable (Bujang et al., 2018). In addition, as noted in Chapter 6, the finding that baseline defeat and entrapment did not predict prospective self-harm may also be explained by insufficient data; despite minimum sample size requirements being met, a third of cells had values of less than 5 in two predictors (suicide death and family self-harm) at follow-up, and a few large standard errors in some analyses may suggest insufficiently powered analyses. Further research with larger samples across both timepoints would allow for teasing out these relationships.

It is also difficult to make definitive conclusions concerning the lack of an association between other variables tested in Study 2 (for instance, self-esteem, social support from friends and significant others, or self-harm by friends) and SSHTB outcomes, given the sample size recruited. Previous studies with adolescents have demonstrated a relationship between self-esteem (O'Connor, Rasmussen, et al., 2009a; O'Connor et al., 2012, 2014; O'Connor, Rasmussen, Miles, et al., 2009; Seguin et al., 2004; Soto-Sanz et al., 2019), social support from peers (Copeland et al., 2019) and self-harm among friends (O'Connor et al., 2014; O'Connor, Rasmussen, Miles, et al., 2009; Quigley et al., 2017a), and self-harm or suicidal outcomes. For this reason, whether the non-significant results in this study are due to insufficient power to detect group differences given the sample, or perhaps a true lack of an association among the population tested here, requires further examination.

While only eight participants completed the CaTS task in Study 3, it was interesting that some of the more frequently endorsed cards for both the first and most recent episodes of self-harm ideation or enactment reflected concepts from the IMV model. For instance, cards concerning the perception of not being able to escape from feelings or situations, feeling trapped, having access to the means to hurt oneself, and acting on impulse without planning were selected by at least half of the participants, indicating evidence for the role of entrapment, access to means and impulsivity within the model. In addition, over half of the

participants endorsed items which reflected features of the Interpersonal Theory of Suicide (Joiner, 2005; Van Orden et al., 2010) and the Three-Step Theory (Klonsky & May, 2015), such as feeling like a burden on people, or hopelessness about the future. To some extent this is unsurprising, given that the CaTS was developed based on the self-harm literature including known key risk factors and theoretical models (Townsend et al., 2016). Nevertheless, these preliminary findings from the eight participants suggest that ideation-to-action models are capturing features relevant to self-harm (ideation/behaviour) experiences among adolescents.

Although it was not the focus of the CaTS task analysis, it is interesting to note that there was some overlap between CaTS findings and a number of results throughout this thesis. As mentioned in Chapter 7, selected cards resembled some of the themes and subthemes generated as part of the interview data, including *Reactions to Death* (Theme 1) in terms of the various emotional, psychological, and physical responses that young people experienced, coping skills employed during times of stress, and ACEs reported which impacted adjustment to changes following loss. Cards also overlapped with the theme of *Systems of Support* (Theme 2), acknowledging the multitude of formal and informal relationships providing support (helpful or unhelpful) to young people. CaTS findings also demonstrated similarities with results from Study 2, where variables such as negative life events, coping and social support from family members, and exposure to family self-harm were found to be significant. Participants completing the CaTS selected cards reflecting social isolation and support (or lack thereof) from parents/caregivers, experiencing negative life events such as problems at school, arguments with parents/caregivers, or bullying, and being exposed to the self-harm of others. However, the selected cards also included having someone close dying or perceptions of defeat and being trapped or unable to escape from feelings or situations, which were not found to be significant predictors of self-harm group

membership in Study 2. As noted above, it may be that these factors are indeed important to young people's self-harm, but could not be captured in Study 2 due to the low sample size. Comparisons between CaTS data and findings from Study 1 are more limited, given the restricted number of explanatory variables considered in this first study. Nevertheless, Study 1 found that suicide bereavement was associated with self-harm group membership, which may reflect the four participants who selected "Someone close to me died" as a relevant event relating to their first episode of self-harm (or two participants for the most recent episode). In sum, the preliminary data gathered from the CaTS task suggest that it is a valuable approach to gather knowledge about the factors relevant to young people's self-harm, and links with some of the findings across this thesis.

Overall, while theory within suicidology has evolved over the decades and come a long way from the earlier sociological conceptualisations, the new generation of ideation-to-action frameworks acknowledges the complexity of this behaviour, and recognises the multitude of biopsychosocial factors which interact to contribute to suicide. This thesis has advanced efforts to empirically test the IMV model, a relative newcomer to the field, which requires further empirical testing of the model's predictions. Rigorous testing of theory is essential to advance knowledge, and consequently refine and improve our understanding of the assessment of risk, interventions, and prevention efforts which aim to tackle the issue. It has been said that ideation-to-action models should steer all subsequent research and theory within suicidology (Klonsky & May, 2014), and theory-based work is essential for guiding effective interventions for suicide (Wenzel & Beck, 2008). Thus, by extending the testing of the IMV model to an adolescent population and exploring the placement of bereavement within the framework, this thesis helps move the field forward by refining our understanding of the topic and of the validity of the theory itself.

### **8.2.2 Bereavement Theory and Research**

With regards to the bereavement literature, Study 3 provides evidence in support of key theories on bereavement in understanding the experience of loss among adolescent populations. Concepts from the Dual Process Model (Stroebe & Schut, 1999, 2010) were shown to be relevant to participants in this study. Adolescents oscillated between at times confronting (e.g., dealing with the emotions relating to the loss), and other times avoiding (e.g., engaging in hobbies or schoolwork) their grief. This oscillation is thought to be important for adaptive coping with death and integration of grief (Stroebe & Schut, 2010). Participants who were able to oscillate between orientations seemed to have better outcomes and adapted to their loss more easily, while those who concentrated on loss-orientation, for instance, described struggles with their mental health and impairments in relationships and functioning. The DPM also suggests that family-level dynamics influence grief (Stroebe & Schut, 2015), and indeed, Study 3 showed that young people do not grieve in isolation, but were influenced by the relationships and experiences of their family members. However, given that young people place a great emphasis on peer relationships and tend to seek more support from friends than family members at this age (Dowdney, 2008), the DPM may not fully account for the social context which influences young people's experiences following a death. The final study also shows that bereaved young people may experience 'overload' (Stroebe & Schut, 2016), a concept within the Dual Process Model which suggests that bereaved individuals feel they have more stressors to deal with than they can handle. Young people felt the accumulation of multiple stressors, adverse life events or childhood experiences, and ambiguous losses could be too much to deal with. Overall, as the Dual Process Model was originally developed with adults in mind (Stroebe & Schut, 2010), this study also adds to the growing evidence base in support of its applicability with adolescents,

an area which has received recent calls for attention (Bylund-Grenklo et al., 2021), although the social factors may not be entirely accounted for by the DPM.

Participants reported positive outcomes following death, including personal growth and a sense of altruism, novel perspectives on life and death, and new roles and responsibilities. This provides evidence that the Meaning of Reconstruction and Loss Framework (Gillies & Neimeyer, 2006) is relevant to young people, where finding meaning in loss and one's new life is suggested to be helpful for adapting to a death (Alves et al., 2018; Bartik et al., 2013a). Gillies and Neimeyer (2006) suggest three key mechanisms by which individuals engage in a search for meaning, including sense making, finding benefit in the experience, and undergoing identity change; it is thought that this process is instigated in an attempt to alleviate distress. Indeed, participants in this study reflected undergoing processes of finding benefits in the loss and evolving identities as a result of the death. Yet, it is worth noting that the participant group recruited consisted of a self-selected sample of adolescents who were for the most part accessing higher education and had volunteered to take part in this study. It may be that this sample was therefore more motivated to find meaning in their experiences by contributing to research, and thus perhaps are not representative of all bereaved adolescents in the community. Whether the framework applies to all bereaved youth therefore requires further assessment.

Tonkin's (1996) model of growing around grief posits that an individual's grief will not necessarily lessen over time, but life begins to grow around it until it is no longer all-consuming. Similarly, adolescents in Study 3 reflected on adapting to their new lives, gaining new experiences and relationships, and growing around their experience of loss, while nevertheless acknowledging that their bereavement is still a part of their lives. It may be that the grief literacy demonstrated by some participants (e.g., acknowledging the lack of an 'end point' to their grief) reflects the developmental age of the sample, and whether the concept of

growing around grief is evident with younger adolescents requires further exploration. Nevertheless, these findings provide further support that key bereavement theories may be applicable to adolescents, although differences between adolescents and adults with regards to the social context of grief may not be fully acknowledged by these theories.

### ***8.2.3 COVID-19 and Understandings of Death and Bereavement***

It is also worth acknowledging that experiences of bereavement may be impacted by the COVID-19 pandemic, and future bereavement research should consider this factor. COVID-19 has brought about unprecedented changes to people's lives, including how individuals view and experience death, dying, and bereavement. With over 160,000 deaths to COVID-19 in the United Kingdom (World Health Organization, 2022b) and over 6 million globally (World Health Organization, 2022a) at the time of writing, the pandemic has been described as a "mass bereavement event" (Harrop et al., 2021), resulting in high needs for support and extra challenges to accessing such support (Eisma & Tamminga, 2020; Harrop et al., 2021). Furthermore, other causes of death including suicides have continued to affect individuals throughout this time. Individuals facing death and dying have had to do so under challenging circumstances; often not being afforded the opportunity to say goodbye to loved ones, or having goodbyes restricted by the need for physical distancing and personal protective equipment. Grief and bereavement have been affected by constant lockdowns and distancing requirements, increasing loneliness and isolation at a time when contact with others is crucial. Attendance at funerals and other death-related rituals, healthcare/service provision being limited (despite many support services adapting their ways of working; Pearce et al., 2021), and secondary impacts of the pandemic have also impacted those grieving. Additionally, the disproportionate impact of the pandemic on minority groups

(Public Health England, 2020; Tai et al., 2021) highlights the structural and systemic inequalities that exist and may further complicate the experience of grief.

There is reason to believe that infectious disease epidemics could increase risk of suicide-related outcomes (Zortea et al., 2020), though research on the impact of COVID-19 on self-harm and suicide rates is ongoing (Appleby, 2021; Appleby et al., 2021; Efstathiou et al., 2022; John et al., 2020; Kapur et al., 2021; Zalsman et al., 2020; Zhang et al., 2020). A living systematic review has so far not found consistent evidence of an increase in suicides, although there is early evidence of a rise in community distress, a fall in hospitalisations for suicidal behaviour, and heightened suicidal thoughts among people with the virus (John et al., 2020). With these points in mind, it is reasonable to believe that the experience of adolescents who have faced a loss during the pandemic (or who have experienced SSHTBs over the past two years) differs from those experiences captured within this thesis. Future research investigating the experiences of young people during the pandemic is therefore necessary. The increased awareness of death and dying during these times may help shape new opportunities for research and funding priorities in the future (Penny, 2020).

Finally, the exclusion of adolescents who had been bereaved within the last six months in Studies 2 and 3, made on ethical grounds following recommendations from previous research (Dyregrov et al., 2011), also meant that certain experiences of bereavement could not be captured through this research. Future research investigating acute grief reactions would therefore be beneficial.

### **8.3 Implications for Practice**

The findings of this thesis have clinical implications relating to the identification, assessment and management of self-harm among youth. It is clear from the empirical chapters that self-harm is prevalent among adolescents in the community (between 14-21%

reporting self-harm and 6-24% reporting self-harm ideation in Studies 1 and 2), and given that it is a known key predictor of completed suicide (Hawton, Saunders, et al., 2012) makes it a critical issue to address. Interventions for preventing suicide can be universal (aimed at the general public or wider population), selective (reaching those at higher risk of suicide than the general population), or indicated (targeting those with a history of SSHTBs) (Cox & Hetrick, 2017), and the findings of this PhD are relevant across all three categories of intervention.

Study 1 found that exposure to the suicide deaths of family members or friends was associated with self-harm group membership, with those in the enactment group more likely to report exposure than controls. This corroborates other findings in the literature showing a heightened risk of self-harm among those bereaved by suicide (Andriessen et al., 2016; Hill et al., 2020; Hua et al., 2019; Pitman et al., 2014). Overall, this suggests that the assessment of adolescent patients at risk of self-harm or suicide should include assessment of their exposure to suicide loss or bereavement; this can inform the development of a treatment plan, including whether additional targeted bereavement support is necessary.

Study 2 provided valuable knowledge by pinpointing factors associated with cross-sectional and longitudinal self-harm thoughts or actions. Specifically, experiencing a greater number of negative life events, more maladaptive coping strategies, less available family social support, less endorsement of glorifying/normalising beliefs about suicide, and greater exposure to family self-harm at baseline was associated with membership in the self-harm ideation or enactment groups. Longitudinally, being less likely to hold stigmatising beliefs about suicide, less likely to endorse glorifying/normalising beliefs about suicide, and more self-harm ideation at baseline predicted membership in the self-harm ideation or enactment groups. Being able to identify predictors of future engagement in behaviours may be especially useful in highlighting modifiable targets for intervention. Additional research is

still necessary to build a cumulative evidence base concerning the factors associated with self-harm or suicide, and to develop interventions which address these identified targets. Should this evidence base be established, intervention strategies which consider the role of negative life events, strengthen healthy coping skills, increase family cohesion and support, and address beliefs and attitudes regarding suicide being stigmatised or glorified, may be beneficial with regards to universal approaches. With regards to the latter, challenging stigma around suicide (and bereavement more generally) is important as such views may result in a reluctance from young people to express their grief or seek help. As discussed in Chapter 7.4.7 and further below, guidelines for young people on speaking to a bereaved friend, and for schools in educating pupils about death and supporting bereaved pupils, can help to normalise conversations, dispel myths, and challenge the stigma around suicide.

More selective interventions which acknowledge the role of family environment, including exposure to the self-harm of others, and indicated early interventions (i.e., targeting those presenting with self-harm ideation) may also be suggested if these findings can be replicated.

Postvention for those bereaved by suicide is an important component of suicide prevention strategies (discussed in Section 8.4 below), though is still an area in need of further work. The evidence so far of the effectiveness of different postvention supports is not robust (Andriessen, Krysinska, et al., 2019; Linde et al., 2017; McDaid et al., 2008; Szumilas & Kutcher, 2011). Currently, there is some evidence (Andriessen, Krysinska, et al., 2019) of the effectiveness of general suicide bereavement supports, including those which involve an individual's wider social environment, and are delivered over time by trained facilitators. However, research on the effectiveness of postvention strategies addressing complicated grief is lacking, and the overall literature base is limited and hampered by methodological shortcomings (Andriessen, Krysinska, et al., 2019). Particularly, this includes a lack of high

quality, controlled studies which employ adequate selection procedures, randomisation and blinding, sufficiently large samples, appropriate follow-up lengths, and validated measures of grief, as well as a lack of qualitative research in the field. In order to advance our understanding of this area, research which seeks to first identify and understand the specific support needs of individuals is critical. This is especially true for adolescent populations, given that the experiences of this age group have been largely neglected in the literature.

The findings from this PhD provide knowledge on how young people experience a bereavement, and what they find to be helpful or unhelpful about the supports they get from their formal and informal surroundings. Family members and friends played an important role for young people by providing emotional support as well as a distraction from grief, while the wider community (schools, organisations, and community members) provided further opportunities to acknowledge and deal with the loss. Specific individuals seen as helpful (e.g., an approachable teacher or family friend), the level of openness and communication, available resources (e.g., staff time or access to mental health care), and perceptions concerning confidentiality shaped experiences around support for young people. Further barriers of overstretched services with lengthy waiting lists and adults seen as gatekeepers limiting access to information and support were also highlighted. This suggests that postvention and interventions for bereaved adolescents more generally should aim to address these shortcomings when supporting young people.

As described in Chapter 7.4.7, specific recommendations have been made in relation to developing resources for the friends and peers of young people and for schools who support bereaved youth. Resources aimed at friends and peers should provide practical advice on how to talk about death, asking the person for their wishes in terms of support, and destigmatising what is often perceived as an awkward and uncomfortable topic among young people. Recommendations for schools stressed the importance of acknowledging the loss,

seeking pupils' choices on what types of support they receive, increasing staff education and awareness on death and grief, and improving staff communication in relation to the bereaved pupil and school adjustments made. As such, areas where young people currently feel let down by their existing networks and systems will be addressed, offering more opportunities to receive adequate support from pre- to post-bereavement.

Findings from this PhD also have implications for supporting youth who may require added input following any (non-suicide) bereavement. Study 3 indicated that grief responses can be diverse, and vary from person to person and over time, regardless of the cause of death. It is acknowledged in the literature that not all people who have experienced a death will require additional professional support (Aoun et al., 2012). However, those who experience, or are at risk of experiencing, complex outcomes may benefit from additional intervention. This is in line with public health approaches to bereavement care (Aoun et al., 2012; Aoun et al., 2018), similar to National Institute for Clinical Excellence (NICE, 2004) guidelines, which advocate for a stepped approach to addressing the needs of bereaved individuals. These suggest that general information on death be offered to the majority of individuals, while people at risk of adverse outcomes (e.g., young people at risk of self-harm) may benefit from more organised, non-specialised support, and specialist services should be made available for those experiencing complex grief reactions (e.g., Akerman & Statham, 2014; Jones et al., 2015; Millar et al., 2020; Morgan et al., 2016; Walsh et al., 2008). In this way, bereavement can be treated as a topic which affects all young people but does not necessarily require the attention of specialist clinical services. For children and young people, it has been said that at the most basic level, youth should be offered support in the way of information on bereavement and guidance to help them understand death and dying (Jones et al., 2015). At the moment, such information for young people is not readily available nor

adequate, which strengthens the need for guidance be produced with young people to address this gap, as discussed in Chapter 7.4.4.

Public health approaches stress the value of developing local community networks and improving partnership working between formal and informal services to provide the most appropriate, timely support for individuals (Aoun et al., 2018). It has been suggested that bereavement in children and young people would be best viewed within a public health framework, not just looking at individual experiences but the wider social circumstances that surround a death and help or hinder children and young people coping with a death (Paul & Vaswani, 2020). The adolescents in this research at times had conflicting views on support; a few felt adequately supported within their own networks and communities. Others reflected on lacking general information about death, dying and bereavement, and some suggested that they would have benefited from additional intervention (for dealing with their loss, or mental health more broadly). Overall, participants expressed that they wanted death to be acknowledged within their wider social environments, and their grief was impacted by others around them. Not all adolescents had access to interventions where desired (given many identified barriers to support), but nevertheless the narratives captured in this research suggest that tiered approaches to bereavement support may be advantageous.

Finally, friends and peers had a significant role in shaping experiences for adolescents in Study 3; as a result, the value of peer support should be taken into account when developing interventions for young people who are bereaved. This is supported by abundant findings from the literature showing benefits of peer support services for adults bereaved by sudden or unexpected deaths, in particular by suicide, which resulted in reduced grief symptoms, increased wellbeing, and personal growth (Bartone et al., 2017). Similarly, findings with children and adolescents suggest that peer support is important for adjustment following parental death (Dopp & Cain, 2012); this is likely due to the fact that peers play an

increasingly important role in adolescent development, and family support may not be available or adequate in times of familial grief. LaFreniere and Cain (2015a) found that boys and children or adolescents bereaved by sudden deaths were less likely to receive peer support than girls or those bereaved by anticipated deaths. This suggests that strategies which incorporate peer support may be beneficial, particularly where they target those groups in need of most support.

#### **8.4 Implications for Policy**

Suicide bereavement is now listed on the policy agendas of many countries, including the suicide prevention approaches of all UK nations (HM Government, 2012; Northern Ireland Department of Health, 2017; Scottish Government, 2018b; Welsh Government, 2015). These approaches recognise the importance of early intervention and support for those bereaved by suicide. Specific to Scotland, the national action plan to prevent suicide, *Every Life Matters*, has an explicit strategic aim to provide better support to people bereaved by suicide (Scottish Government, 2018b). Action 4 of this plan outlines the commitment to provide timely and effective support to these individuals, and recognises the heightened risk of suicide among people who have lost someone to suicide, often owing to increased stigma and isolation following such a death. The action also acknowledges the range of individuals who may be affected, including family and friends, but also other carers, staff who were involved in the care and treatment of the person, and first responders. The results from this PhD support the policy approach that postvention support should not only be accessible to immediate relatives and friends of those who died, but other individuals in the lives of young people; adolescents taking part in this research knew many people who had died by suicide, not only close relatives or friends.

Ensuring that the needs of children and young people are addressed across all actions of the plan is a further aim of Every Life Matters (Scottish Government, 2018b). The plan recognises the increasing demand for mental health support among young people, and establishes an aim to expand available help and support settings for youth, especially low intensity support to improve mental wellbeing on a universal level. Investment in universal strategies to promote adolescent mental health is supported by the data collected in this thesis. Participants in Study 1 reported mean depression ( $M = 17.0$ ,  $SD = 3.1$ ) and anxiety ( $M = 12.9$ ,  $SD = 3.9$ ) scores which exceeded the recommended cut-offs to indicate clinical concern (7 and 9, respectively). In Study 2, depression scores at follow-up were also slightly higher than the recommended cut-off. Similarly, while measures of psychopathology were not utilised in Study 3, several participants reflected on experiencing difficulties with their mental health and long waiting lists for mental health services. This reinforces the need for policies which put improved adolescent mental health and wellbeing for all at the centre.

The role of educational providers in identifying and supporting at risk young people (which includes those going through transitional periods such as adolescence) is also highlighted in Every Life Matters (Scottish Government, 2018b), as well as providing early education on suicide prevention, and building emotional intelligence and resilience more generally. Similarly, the Curriculum for Excellence in Scotland highlights mental, emotional, social, and physical wellbeing as central to the learning environments of children and young people (Education Scotland, 2021). Its section on mental and emotional wellbeing specifically emphasises skills to cope through adversity, especially during times of change and loss. Given that maladaptive coping skills were found to be associated with SSHTBs in Study 2, and many adolescents reported a range of negative coping strategies following a death in Study 3, educational efforts which aim to promote healthy coping skills among youth would be of benefit. The Scottish Government's approach to supporting children and young

people and their families, *Getting it Right for Every Child* (Scottish Government, 2021a), puts children and young people's rights at the heart of service delivery. It aims to be child-focused, taking into account the wider influences impacting young people's wellbeing (including adversities such as bereavement), and strives to tackle needs early such that individuals who may be vulnerable can be identified and provided with early support to improve long term outcomes.

Yet, bereavement does not feature prominently in national policy relating to young people. Recently, the Scottish Government has faced calls to introduce compulsory education on bereavement in schools (Scottish Parliament, 2020). As noted in Chapter 7, research by Child Bereavement UK (2018) found that only 10% of teachers in the United Kingdom have received training on bereavement, despite most school staff viewing training as necessary to confidently and competently respond to bereaved young people. Scottish data similarly showed that teachers report low confidence in supporting pupils when someone dies, and a low awareness of the needs of bereaved young people, potentially limiting the extent to which young people are supported (McManus & Paul, 2019). Given that the findings from Study 3 showed that several young people perceived that the support offered through schools was inadequate during their bereavement (e.g., schools not acknowledging the death, addressing it insensitively, or a lack of communication between teachers), this may indeed reflect issues stemming from the lack of compulsory staff training and school policies on how to assist children and young people through bereavement.

A whole school approach to supporting loss and bereavement was developed by Glasgow City Council (2013, 2021), and emphasised the importance of open and honest communication with children and young people about bereavement, having policies and procedures in place to support individuals where necessary, and recognising changing staff support needs in relation to bereavement. Death education and building young people's

resilience in coping with a death were also stressed as being critical. There is broader support for this from the compassionate communities movement, which has made calls to normalise conversations about death and dying and improve death and grief literacy within society (Breen et al., 2020). In line with this approach, it is recommended that on a national level, education on death, dying, and bereavement be integrated within the school curriculum, and schools should be better supported to develop their own bereavement policies and strategies to support pupils (and staff) who experience such a life event. Improved communication within schools and between schools and external organisations is also recommended, in cases where adolescents receive support from external agencies. This may help tackle some of the challenges highlighted by participants in Study 3, such as the perception that death is present but avoided within school systems, and a lack of communication creates barriers to dealing with death.

## **8.5 Challenges of Research**

### ***8.5.1 Issues with Recruitment in Schools***

Research into self-harm and suicide with adolescent populations can present a number of challenges given the nature of the topic under study. Over the course of this PhD, a number of obstacles to data collection were encountered. With regards to Study 2, access to pupils in schools was first sought from the 32 Local Education Authorities (LEAs) in Scotland, which was a lengthy and complex process due to varied application procedures across different areas. Some LEAs declined access to schools due to an abundance of research requests, as well as concerns about the sensitivity of the topic. For those which did grant access, contact was made with individual head teachers to request participation from individual pupils or year groups. Again, head teachers voiced concerns regarding the nature of the research, as they felt that there would be significant risk of harm or distress to pupils.

This was despite reassurances that the evidence shows that self-harm or suicide research (Biddle et al., 2013; Dazzi et al., 2014; DeCou & Schumann, 2018; Hasking et al., 2015; Robinson et al., 2011) or research on bereavement (Butler et al., 2018; Dyregrov et al., 2011; Hawton, Houston, et al., 2003; Omerov et al., 2014; Wong et al., 2010) are not associated with iatrogenic effects, and that there were various protocols in place to ensure the safety and wellbeing of pupils.

Some individual class teachers also expressed concerns about the research after head teachers had provided permission for pupils to take part. The majority of schools which did take part agreed to using parental opt-in consent procedures (apart from one, which used parental opt-out), meaning that many forms were left unreturned. While the reasons for the low response rate are ultimately unknown, discussions with teaching staff indicated that pupils and parents often fail to return inessential paperwork, whether regarding research projects or other school correspondence. In the school which employed passive parental consent, no pupils or parents opted out, suggesting that the additional task of having to return an extra form was a deterrent to participation. When pupils had received parental consent to take part, a further issue was finding a convenient time with the school to meet with pupils, explain the study, and then return two weeks (and six months) later to carry out data collection, given busy school schedules during term-time. Ultimately, 185 pupils were recruited at baseline, but the various hurdles to obtaining consent and access may have limited the final achieved sample size. This was particularly an issue with the suicide-bereaved sample, which was limited in this study. Recruitment might have benefitted from being more targeted, perhaps through discussions with school staff to identify suicide-bereaved pupils who might wish to take part. However, this approach was not taken as the aim was to capture a representative sample of adolescents across year groups and schools in order to estimate the prevalence of bereavement. If redoing this study, shortening the

questionnaire (and thus perhaps removing some of the more sensitive items and making it less burdensome timewise to schools and pupils) might have increased study uptake and consequently the sample size. Nevertheless, previous research with children and young people on sensitive issues has documented similar challenges in gaining access and recruiting young people, especially from school settings and as a result of gatekeepers (Coyne, 2010; Oates & Riaz, 2016; Plummer et al., 2014). While these issues encountered were not unique to this programme of research, they presented significant challenges for data collection throughout the PhD.

Study 3 also faced challenges in terms of recruitment. Participants were sought from various sources. Only one LEA agreed to allow the study to take place in its schools, but no schools within this LEA consented to participate. Organisations which support young people were contacted, including those which provided targeted support to adolescents (e.g., in relation to bereavement or self-harm), as well as general youth organisations. Again, similar reasons for a reluctance to participate across schools and organisations were expressed by gatekeepers as in Study 2, such worries about the potential for distress as well as timing concerns.

Substantial concerns (at times valid) and roadblocks were raised by several gatekeepers along the way, even though many adolescents were themselves receptive and willing to share their views and experiences when asked directly. The additional complexity of trying to recruit this difficult-to-access population demonstrates the importance of ensuring that young people are not excluded from engaging in topics which are clearly relevant to them. This is especially important from a rights-based perspective, as children and young people have the right to express their views and be heard in matters which affect them (United Nations, 1989). It is therefore essential to continue striving for open dialogue with schools and parents and opening conversations with educational and organisational staff who

are in a prime position to support young people, to ensure that they are not denied a voice in shaping issues which directly impact them through the process of trying to protect them. Supporting the involvement of children and young people in the process of research not only improves the quality of research, but ensures that actions that are taken as a result of study findings address issues which young people themselves consider to be important.

### ***8.5.2 Issues with Recruitment During COVID-19***

Individuals who took part in Study 3 were sourced from universities, bereavement support organisations, public noticeboards, social media posts, and word of mouth. A number of additional youth and bereavement organisations had agreed to take part at the end of 2019 and beginning of 2020. However, in February 2020, concerns over the COVID-19 pandemic began circulating within the country, and many organisations began to close their doors to supporting individuals face-to-face. In line with government restrictions and university regulations, recruitment was stopped at this point. Unfortunately, this meant that due to a lack of data from adolescents bereaved by different types of deaths, causes of death could not be compared in the analysis. As noted in Chapters 4 and 7, it was nevertheless felt that the interview data from the 13 participants recruited was sufficient to provide an in-depth analysis of the experiences of bereaved adolescents more generally. CaTS data from the eight individuals collected up to this point were interpreted on a descriptive level rather than through formal statistical analysis as initially intended, for this reason. As mentioned in Section 7.4.8, these data have been presented together with the interview data given the original plans for analysis, but it is intended that they will be submitted separately for future publications.

### **8.5.3 Researcher Reflections**

A discussion of the main ethical issues involved in conducting this research was provided in Chapter 4.5, and each empirical chapter considered specific ethical choices and challenges that presented during the course of each study. Yet an area which often goes overlooked during the research process is researcher preparedness and wellbeing. As noted in Chapter 4.5, research on sensitive topics like suicide and self-harm or bereavement may be challenging for the researcher, and can lead to emotional, psychological and physical health consequences (Butler et al., 2017; Dickson-Swift et al., 2016; Lloyd-Richardson et al., 2015; McKenzie et al., 2016). This is especially as data collection and analysis involves repeated exposure to detailed narratives of difficult and/or traumatic events. McKenzie et al. (2016) highlighted that researchers from non-clinical backgrounds may particularly be at risk of adverse outcomes when investigating such topics. For instance, non-clinical researchers may be underprepared for the level of detail and sensitivity that presents in the data, and may become drawn into individual stories and unresolved outcomes. Researchers can also become emotionally exhausted from repeated exposure to the data and significant amounts of lone working, and develop frustrations with health care systems or particular cases of poor professional conduct (e.g., presentations of self-harm handled insensitively in clinical settings) (McKenzie et al., 2016). Indeed, some of these issues (e.g., lone working) are not unique to sensitive data but also apply to doctoral research more generally, which has been associated with poor mental health and wellbeing among postgraduate research students (Almasri et al., 2021; Levecque et al., 2017; Woolston, 2019).

Although these topics of study were not a completely novel field to the researcher, this programme of research was nevertheless challenging at times, despite careful planning and awareness of the potential issues that could arise. This was especially true when becoming immersed in the qualitative data or facing difficulties with recruitment and other

study setbacks. Measures were in place to ensure the researcher's wellbeing throughout the different stages of this PhD. This included regular supervision and debriefing, training to ensure preparedness to deal with any arising issues (e.g., self-harm or participant distress), and informal peer support from fellow early career researchers, which were all found to be effective measures. A constant process of reflection was also undertaken throughout this programme of study, and in particular during data collection and analysis, to monitor thoughts during the more emotionally trying phases of the PhD. This was especially important during data collection in Study 3, where the experience of conducting one-to-one interviews could be challenging and draining at times. In sum, it is important that adequate provisions are put in place for researchers, and particularly doctoral students, new to investigating the field and who may be investigating a hard-to-reach population, to ensure that they are best prepared to convey the stories of participants who contribute their time and efforts to research.

### **8.6 Concluding Remarks**

The death of someone significant can place an immeasurable strain on developing adolescents, threatening their self-concept, development of familial and peer relationships, and physical and mental wellbeing. Most concerning is the potential that bereavement results in an increased risk of suicide among these adolescents. Considerable research documents the range of outcomes following a death in childhood or adolescence, but the relationship between bereavement and suicidality is less well understood. This PhD set out to improve our understanding of the experiences of adolescents who have experienced a death to suicide or other causes, and to explore factors related to the development of adverse outcomes, including self-harm. To begin with, there was an urgent need for an up-to-date review of adolescent studies examining the relationship between suicide versus non-suicide

bereavement and SSHTB outcomes. The systematic review conducted at the start filled this gap by exploring the existing evidence and identifying key areas necessitating further exploration. Specifically, studies using community-based and representative samples, validated measurement tools, grounded in theory, and employing longitudinal and qualitative approaches were found to be lacking. To tackle these areas, a series of three empirical studies was developed to provide new knowledge on the experiences of adolescents in Scotland facing a bereavement.

Studies 1 and 2 provided specific estimates of the prevalence of adolescents in Scotland who have experienced a death, data which has previously been lacking, and demonstrated that exposure to death or bereavement is a common experience among young people. Several factors in Studies 1 and 2 were examined based on their relevance to bereavement outcomes and their inclusion within a theoretical model of understanding suicide; the findings provide tentative support for some aspects of the IMV model. Namely, exposure to suicide loss, experiences of negative life events, personal beliefs around suicide being stigmatising or glorified/normalised, maladaptive ways of coping, low family social support, and previous self-harm ideation were associated with engagement in self-harm or suicidal thoughts and behaviours. Study 3 made a unique contribution by exploring the lived experiences of a group of adolescents who have experienced a bereavement, and provided novel insights into the barriers and challenges that Scottish youth perceive as influencing their experiences of loss. It also provided novel insights into how the CaTS task can be used to understand self-harm within the context of a bereavement (and how this links back to IMV model predictions on exposure to deaths), and can be useful for opening up conversations around self-harm with research participants.

Despite challenges faced during the research process, the results provide valuable insights into the perceptions of bereaved adolescents. This PhD has provided a platform to

voice the experiences, views and concerns of this group, who are often excluded from conversations and research about topics which concern them directly. Further work is needed in this area to elucidate the pathways by which bereavement may make someone vulnerable to self-harm. Developing and testing of theory is necessary to advance this field, which has implications for clinical and policy approaches. Such research is crucial to build a stronger evidence base that can ultimately help support bereaved youth most at risk of harmful outcomes.

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## Appendix A. Study 2 Questionnaire



# LIFE EVENTS AND WELLBEING IN YOUNG PEOPLE QUESTIONNAIRE

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Thank you for agreeing to take part in this study. We are interested in learning about your general life experiences and feelings in day-to-day life.

Please try to answer as honestly as you can. There are no 'right' or 'wrong' answers, and all the responses you give will be completely anonymous, private, and confidential. Nobody will be able to identify who you are, and your questionnaire will not be shared or seen by anybody other than the researchers.

Try not to spend too much time on any question, and if there is anything you do not wish to answer or do not understand, just leave it blank.

When you have finished, place your questionnaire inside the envelope you have been given.

---

Name of School: \_\_\_\_\_

Year Group:  S1  S2  S3  S4  S5  S6

**1. Please answer the following 4 questions to help us create a unique code for you. Because we are asking you to complete the questionnaire twice, we need to find a way to link your questionnaires without using your name, therefore we are asking these questions to create a unique code.**

<b>The first two letters of your mother's first name:</b> <i>(e.g. if her name is Elisabeth, enter EL)</i>	
---	--

<b>The day of the month on which you were born:</b> <i>(e.g. if you were born on the 18th of May, enter 18)</i>	
--	--

<b>The last two letters of the town or city you were born in:</b> <i>(e.g. if you were born in Paisley, enter EY)</i>	
--	--

<b>The last two digits of your telephone number:</b> <i>(e.g. if your telephone number ends in 654321, enter 21)</i>	
---	--

**2. Please tell us a bit more about yourself.**

What is your age (in years)? \_\_\_\_\_

What is your gender?

- Male  
 Female  
 Other  
 Prefer not to say

How would you describe your ethnic origin?

- White  
 Mixed/Multiple Ethnicities  
 Asian/Asian Scottish or Asian British  
 Black/African/Caribbean/Black Scottish or Black British  
 Any Other ethnic group (please describe): \_\_\_\_\_  
 Unknown/Prefer not to say

**3. Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement by circling one answer.**

a. On the whole, I am satisfied with myself.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

b. At times I think I am no good at all.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

c. I feel that I have a number of good qualities.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

d. I am able to do things as well as most other people.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

e. I feel I do not have much to be proud of.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

f. I certainly feel useless at times.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

g. I feel that I'm a person of worth, at least on an equal plane with others.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

h. I wish I could have more respect for myself.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

i. All in all, I am inclined to feel that I am a failure.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

j. I take a positive attitude toward myself.

Strongly  
Agree

Agree

Disagree

Strongly  
Disagree

**4. Below is a list of stressful life events that young people sometimes experience. If you have experienced any of these events, please answer whether this was in the past 12 months and/or more than a year ago (tick more than one box if needed).**

	Yes, in the past 12 months	Yes, more than a year ago	No
Have you had problems keeping up with schoolwork?			
Have you had difficulty in making or keeping friends?			
Have you had any serious arguments or fights with friends?			
Have you had any serious problems with a boyfriend or girlfriend?			
Have you been bullied at school?			
Have your parents separated or divorced?			
Have you had any serious arguments or fights with either or both of your parents?			
Have your parents had any serious arguments or fights?			
Have you or any member of your family had a serious illness or accident?			
Have any close friends had a serious illness or accident?			
Have you been seriously physically abused?			
Have you been in trouble with the police?			
Has anyone among your immediate family (mother, father, brother, or sister) died?			
Has anyone close to you died?			
Has anyone among your family or friends committed suicide? • If 'yes', who was it? _____			
Has anyone among your family attempted suicide or deliberately harmed themselves?			
Has anyone among your close friends attempted suicide or deliberately harmed themselves?			
Have you had worries about your sexual orientation (i.e. that you may be gay or bisexual)?			
Has anyone forced you (i.e. physically or verbally) to engage in sexual activities against your will?			
Has any other distressing event occurred involving you, your family or close friends? • If 'yes', please describe _____			

**5. The next few questions ask about your experiences with the death of someone close to you. Some questions might sound similar to other statements you have already answered; this is just so we can understand your experiences in a different way.**

Have you experienced the death of someone important to you during your lifetime, such as a friend or family member?

- No → If you answered **no** to this question, please go to Q8 on page 7.  
 Yes → If you answered **yes** to this question, please continue with Q6 below.

**6. Please tell us a bit more about the person who died. If you have lost more than one person, please answer the following questions in relation to whichever death affected you the most.**

(a) What was this person's relationship to you? *Please tick one.*

This person was my...

- |                                      |                                      |  |
|--------------------------------------|--------------------------------------|--|
| <input type="checkbox"/> mother      | <input type="checkbox"/> aunt        | <input type="checkbox"/> family friend |
| <input type="checkbox"/> father      | <input type="checkbox"/> uncle       | <input type="checkbox"/> other friend  |
| <input type="checkbox"/> step-mother | <input type="checkbox"/> niece       | <input type="checkbox"/> classmate     |
| <input type="checkbox"/> step-father | <input type="checkbox"/> nephew      | <input type="checkbox"/> someone else: |
| <input type="checkbox"/> grandmother | <input type="checkbox"/> cousin      | _____                                  |
| <input type="checkbox"/> grandfather | <input type="checkbox"/> boyfriend   |  |
| <input type="checkbox"/> brother     | <input type="checkbox"/> girlfriend  |  |
| <input type="checkbox"/> sister      | <input type="checkbox"/> best friend |  |

(b) How did this person die? *Please tick one.*

- natural expected death (e.g. illness such as cancer)  
 natural unexpected/sudden death (e.g. heart attack, stroke)  
 accident (e.g. road traffic accident)  
 suicide  
 murder/homicide  
 don't know  
 other cause: \_\_\_\_\_

(c) Thinking about the person who died, please rate the closeness of your relationship with them by indicating how close you were, from 1 (not close at all) to 5 (very close). *Please circle one number.*

1                      2                      3                      4                      5

(d) How long ago did this person die (if you cannot remember the precise date, please provide as much information as possible)? \_\_\_\_\_

(e) How old was this person when they died (approximately)? \_\_\_\_\_ years old

(f) How old were you when this person died (approximately)? \_\_\_\_\_ years old

(g) For how long did you know this person before they died (approximately)? \_\_\_\_\_

(h) Thinking about your relationship with the person immediately before the death, how would you describe your relationship? *Please tick one.*

- Extremely positive  
 Somewhat positive  
 Unclear/uncertain  
 Somewhat negative  
 Extremely negative

(i) How surprised were you about the death of this person? *Please tick one.*

- Extremely surprised  
 Very surprised  
 Somewhat surprised  
 Slightly surprised  
 Not at all surprised

(j) Was the person living with you before they died?

- Yes  No

(k) Did you attend this person's funeral?

- Yes  No

**7. Please mark the answer that best describes how often you experienced each grief-reaction in the last month. Please continue on the next page.**

		Almost never	Sometimes	Always
1	That s/he died, feels as something that has torn everything apart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	I find it hard to do the things I normally do, because I think of him/her so much	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Thinking of him/her confuses me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	It feels difficult that s/he died; I think it's not fair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	I would like to be with him/her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	I want to go to places that are related to him/her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		<b>Almost never</b>	<b>Sometimes</b>	<b>Always</b>
7	I am angry about his/her death	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	I cannot believe that s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	His/her death has scared me; I am totally upset by it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	I find it difficult to trust other people since s/he has died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	I find it difficult to love other people since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	I do or feel the same things as s/he did	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	I don't want to think about the fact that s/he is dead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	I feel no interest in things since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	I hear his/her voice speak to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	I see him/her stand in front of me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	It feels as if nothing really touches me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	It feels unfair that I am still alive while s/he is dead; I feel guilty about that	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	I continue to feel angry about his/her death	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	I am jealous of people who did not lose someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	I think that the future has no purpose without him/her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	I feel very alone since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	My life can only be pleasant if s/he is around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	It feels as if a part of me is dead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	It feels as if his/her death has changed everything	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	I feel less safe since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	I have no control over things happening in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	I am doing worse (in school and with friends) since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	I am more easily angry, nervous and scared since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	I sleep poorly, since s/he died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>Almost never</b>	<b>Sometimes</b>	<b>Always</b>

**8. Over the last 2 weeks, how often have you been bothered by the following problems?**

	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not being able to stop or control worrying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worrying too much about different things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trouble relaxing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being so restless that it is hard to sit still	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Becoming easily annoyed or irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling afraid as if something awful might happen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**9. Using the scale below, please rate how much you agree with the descriptions of people who take their own lives (die by suicide).**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
brave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cowardly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dedicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
disconnected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
an embarrassment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
immoral	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
irresponsible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
isolated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
noble	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pathetic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
shallow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
strong	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
stupid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vengeful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**10. These questions ask about how you might have been feeling or acting recently. For each question, please indicate with an X how you have been feeling or acting in the past two weeks.**

*If a sentence was true about you most of the time, check TRUE.*

*If a sentence was only sometimes true, check SOMETIMES.*

*If a sentence was not true about you, check NOT TRUE.*

	True	Some- times	Not True
I felt miserable or unhappy.			
I didn't enjoy anything at all.			
I felt so tired I just sat around and did nothing.			
I was very restless.			
I felt I was no good any more.			
I cried a lot.			
I found it hard to think properly or concentrate.			
I hated myself.			
I was a bad person.			
I felt lonely.			
I thought nobody really loved me.			
I thought I could never be as good as other kids.			
I did everything wrong.			

**11. Below is a series of statements, which describe how people can feel about themselves. Read each item carefully and circle the number to the right of the statement that best describes how you have felt in the last 7 days. Use the scale below. Please continue on the next page.**

0 = Never	1 = Rarely	2 = Sometimes	3 = Mostly (a lot)	4 = Always		
1	I feel that I have not made it in life	0	1	2	3	4
2	I feel that I am a successful person	0	1	2	3	4
3	I feel defeated by life	0	1	2	3	4
4	I feel that I am basically a winner	0	1	2	3	4
5	I feel that I have lost my standing in the world	0	1	2	3	4
6	I feel that life has treated me like a punch bag	0	1	2	3	4
7	I feel powerless	0	1	2	3	4
8	I feel that my confidence has been knocked out of me	0	1	2	3	4
9	I feel able to deal with whatever life throws at me	0	1	2	3	4

0 = Never	1 = Rarely	2 = Sometimes	3 = Mostly (a lot)	4 = Always
-----------	------------	---------------	--------------------	------------

10	I feel that I have sunk to the bottom of the ladder	0	1	2	3	4
11	I feel completely knocked out of action	0	1	2	3	4
12	I feel that I am one of life's losers	0	1	2	3	4
13	I feel that I have given up	0	1	2	3	4
14	I feel down and out	0	1	2	3	4
15	I feel that I have lost important battles in life	0	1	2	3	4
16	I feel that there is no fight left in me	0	1	2	3	4

**12. The following questions ask about times in your life when you may have felt low and had negative thoughts about life.**

Have you ever deliberately taken an overdose (e.g. of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?

- No → → → Please go to **Question 18** on **page 10**.
- Yes, once → → Please continue with **Question 13** below.
- Yes, more than once → Please continue with **Question 13** below.

13. When was the first time you took an overdose or tried to harm yourself?

- Less than a month ago       Between a month and a year ago       More than a year ago

14. Thinking about the first time you took an overdose or tried to harm yourself, was this before or after you lost a loved one due to any cause of death?

- Before the bereavement
- After the bereavement
- N/A, I have not been bereaved

15. When was the last time you took an overdose or tried to harm yourself?

- Less than a month ago       Between a month and a year ago       More than a year ago

16. Can you remember the date when you took your last overdose/tried to harm yourself (if you cannot remember the precise date, please provide the month or as much information as possible)? \_\_\_\_\_

Describe what you did to yourself on that occasion (Please give as much detail as you can – for example, the name of the drug taken in an overdose).

--

17. Do any of the following reasons help to explain why you last took an overdose or harmed yourself in some other way? *Please select all that apply.*

	No	Yes
I wanted to show how desperate I was feeling	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to die	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to punish myself	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to frighten someone	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get my own back on someone	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get relief from a terrible state of mind	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to find out whether someone really loved me	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get some attention	<input type="checkbox"/>	<input type="checkbox"/>

18. Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)

No  Yes

b. If yes, was this before or after you lost a loved one due to any cause of death?

- Before the bereavement  
 After the bereavement  
 Before and After the bereavement  
 N/A, I have not been bereaved

19. Have you ever had thoughts of killing yourself?

No  Yes

b. If yes, was this before or after you lost a loved one due to any cause of death?

- Before the bereavement  
 After the bereavement  
 Before and After the bereavement  
 N/A, I have not been bereaved

20. We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. These questions ask you to indicate what you generally do and feel when you experience stressful

events. Obviously, different people deal with things in different ways, but we're interested in what you usually do. Don't answer on the basis of whether it seems to be working or not - just whether or not you're doing it. Please try to respond to each item separately in your mind from each other item. Make your answers as true FOR YOU as you can. Please continue on the next page.

Please circle your answer from 1 to 4 using the following scale:

---

1. I haven't been doing this at all	2. I've been doing this a little bit	3. I've been doing this a medium amount	4. I've been doing this a lot
-------------------------------------	--------------------------------------	---	-------------------------------

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I've been turning to work or other activities to take my mind off things.	1	2	3	4
I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
I've been saying to myself "this isn't real".	1	2	3	4
I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
I've been getting emotional support from others.	1	2	3	4
I've been giving up trying to deal with it.	1	2	3	4
I've been taking action to try to make the situation better.	1	2	3	4
I've been refusing to believe that it has happened.	1	2	3	4
I've been saying things to let my unpleasant feelings escape.	1	2	3	4
I've been getting help and advice from other people.	1	2	3	4
I've been using alcohol or other drugs to help me get through it.	1	2	3	4
I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
I've been criticizing myself.	1	2	3	4
I've been trying to come up with a strategy about what to do.	1	2	3	4
I've been getting comfort and understanding from someone.	1	2	3	4
I've been giving up the attempt to cope.	1	2	3	4
I've been looking for something good in what is happening.	1	2	3	4
I've been making jokes about it.	1	2	3	4
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
I've been accepting the reality of the fact that it has happened.	1	2	3	4

---

1. I haven't been doing this at all	2. I've been doing this a little bit	3. I've been doing this a medium amount	4. I've been doing this a lot
-------------------------------------	--------------------------------------	---	-------------------------------

---

I've been expressing my negative feelings.	1	2	3	4
I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
I've been trying to get advice or help from other people about what to do.	1	2	3	4
I've been learning to live with it.	1	2	3	4
I've been thinking hard about what steps to take.	1	2	3	4
I've been blaming myself for things that happened.	1	2	3	4
I've been praying or meditating.	1	2	3	4
I've been making fun of the situation.	1	2	3	4

**21. For each of the following attitude statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and circle the number to the right of the statement that best describes the degree to which each statement is Like You. Use the scale below. Please continue on the next page.**

	<b>0 = Not at all like me</b>	<b>1 = A little bit like me</b>	<b>2 = Moderately like me</b>	<b>3 = Quite a bit like me</b>	<b>4 = Extremely like me</b>	
1	I am in situation I feel trapped in	0	1	2	3	4
2	I have a strong desire to escape from things in my life	0	1	2	3	4
3	I am in a relationship I can't get out of	0	1	2	3	4
4	I often have the feeling that I would just like to run away	0	1	2	3	4
5	I feel powerless to change things	0	1	2	3	4
6	I feel trapped by my obligations	0	1	2	3	4
7	I can see no way out of my current situation	0	1	2	3	4
8	I would like to get away from other more powerful people in my life	0	1	2	3	4
9	I have a strong desire to get away and stay away from where I am now	0	1	2	3	4
10	I feel trapped by other people	0	1	2	3	4
11	I want to get away from myself	0	1	2	3	4
12	I feel powerless to change myself	0	1	2	3	4
13	I would like to escape from my thoughts and feelings	0	1	2	3	4

0 = Not at all like me	1 = A little bit like me	2 = Moderately like me	3 = Quite a bit like me	4 = Extremely like me		
14	I feel trapped inside myself	0	1	2	3	4
15	I would like to get away from who I am and start again	0	1	2	3	4
16	I feel I'm in a deep hole I can't get out of	0	1	2	3	4

**22. We are interested in how you feel about the following statements. Read each statement carefully, and circle a number to show how much you agree or disagree about each statement.**

*Circle the "1" if you **Very Strongly Disagree***

*Circle the "2" if you **Strongly Disagree***

*Circle the "3" if you **Mildly Disagree***

*Circle the "4" if you are **Neutral***

*Circle the "5" if you **Mildly Agree***

*Circle the "6" if you **Strongly Agree***

*Circle the "7" if you **Very Strongly Agree***

a.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7
b.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
c.	My family really tries to help me.	1	2	3	4	5	6	7
d.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
e.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
f.	My friends really try to help me.	1	2	3	4	5	6	7
g.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7
h.	I can talk about my problems with my family.	1	2	3	4	5	6	7
i.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
j.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
k.	My family is willing to help me make decisions.	1	2	3	4	5	6	7
l.	I can talk about my problems with my friends.	1	2	3	4	5	6	7

**23. Is there anything you would like to add about any of the questions you were asked?**

**24. If you still have time, can you tell us about the things young people can do to lift their mood when they are feeling sad or depressed? *Please continue on the back page if necessary.***

**This is the end of the questionnaire.**

**Thank you for taking the time to complete this study!**



*If you feel that the survey has highlighted issues that you would like to speak to someone about, please see the details of resources you can contact in the Useful Contacts pamphlet provided to you.*

## Appendix B. Study 3 Interview Guide

# Life After Someone Important Has Died

## Interview Guide

Materials: PIS, Consent Form, Demographic and VAS Form, Interview Guide, Self-Harm Questionnaire, Debrief with Sources of Support, Dictaphone, Spare batteries, Paper, Pen, Interviewer Reaction Sheet (to be completed after study)

### Main Interview:

#### **General introduction**

- As you know, the purpose of the interview is to give you an opportunity to talk about how life has been for you since the death of \_\_\_\_\_. To start off, can you tell me about yourself?

*Prompt: What things do you like to do?  
How do you spend your free time?*

- Can you tell me a bit about \_\_\_\_\_?

*Prompt: What was he/she like?  
What did \_\_\_\_\_ spend his/her time doing?  
What things were important to him/her?*

- What was your relationship like with \_\_\_\_\_?

*Prompt: closeness, quality*

- Could you tell me a bit about \_\_\_\_\_'s death? For example, how did they die? When?

*Prompt: How surprised were you about the death?  
How old were you?*

#### **Knowledge of the death**

- How did you find out about \_\_\_\_\_'s death?

*Prompt: In what way were you made aware?*

- What information did you know about \_\_\_\_\_'s death when it happened?

*Prompt: Were you present when he/she died?  
Did you know how they died at the time?*

- Has that information changed over time?

*Prompt: Have you since found out new facts about their death?*

### **Impact on daily life**

- What has life been like since \_\_\_ died?

*Prompt: Is someone else taking care of you now?*

*Have your living arrangements changed?*

*Probe: symptoms of prolonged grief, school problems, relationship problems, alcohol/drug use, self-harm*

- What were some of the biggest challenges you faced by the death of \_\_\_?
- Do other people know how \_\_\_ died?
- Have you noticed any differences in how other people react towards you since the death of \_\_\_?

*Prompt: In what way/Why do you think that?*

### **Coping strategies**

- There are many ways people deal with difficult situations. What did you do to cope when \_\_\_ died?

*Prompt: Do you think this was this helpful? Why or why not?*

- What do you do to cope now, when you find yourself in a stressful or difficult situation?

*Prompt: Do you think this is helpful? Why or why not?*

- *If participant responds self-harm:* Are you aware if any of your friends or family members have previously thought about self-harm or suicide, or have ever harmed themselves?

*Prompt: Do you know anyone who has intentionally injured themselves?*

*Do you know anyone who has tried to take their own life?*

- If yes: How has that has affected you?

### **Social support**

- I am interested to know the kind of support you've had from the people that know you, can you tell me about this?

*Prompt: Family; Do they know the details of the death? Were they helpful/unhelpful? Why do you think that?*

*Prompt: Friends; Do they know the details of the death? Were they helpful/unhelpful? Why do you think that?*

*Prompt: Anyone else important; Do they know the details of the death? Were they helpful/unhelpful? Why do you think that?*

- Have you received support from any services (professionals/organisations) since the death of \_\_\_?

*Prompt: Do they know the details of the death? Were they helpful/unhelpful? Why do you think that?*

- Is there any support you wished you would have received after the death but did not?
- If you're having a tough day, who is the one person you would turn to for support?

*Prompt: Why? How do they help?*

### **Beliefs about suicide**

- How would you describe people who die by suicide?

*Prompt: Why do you think this?*

- Have your thoughts or attitudes about people who die by suicide changed since the death of \_\_\_?

### **Experiences of multiple deaths? [included after feedback from pilot interviews]**

#### **Wrapping up**

- Is there anything else you would like to add about your life since \_\_\_ died that I've not asked you?
- Is there anything you would like to say with the recording device turned off?

Thank you.  
*Stop recording.*

## Appendix C. Study 3 Brief Self-Harm Questionnaire



# Life After Someone Important Has Died

## Brief Self-Harm Questionnaire

---

Thank you for agreeing to take part in this study. We are interested in learning about your experiences with self-harm.

Please try to answer the following questions as honestly as you can. There are no 'right' or 'wrong' answers. All the responses you give will be kept private, confidential, and anonymous so that nobody can identify you from your responses.

Try not to spend too much time on any question, and if there is anything you do not understand, feel free to ask. If there is anything you do not wish to answer, just leave it blank.

When you have finished, please return this form to the researcher.

---

The following questions ask about times in your life when you may have felt low and had negative thoughts about life.

1. Have you ever deliberately taken an overdose (e.g. of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?

- No → → → Please go to **Question 10** on **page 3**.
- Yes, once → → Please continue with **Question 2** below.
- Yes, more than once → Please continue with **Question 2** below.

2. When was the **first time** you took an overdose or tried to harm yourself?

- Less than a month ago       Between a month and a year ago       More than a year ago

3. How old were you when you **first** took an overdose/tried to harm yourself?

\_\_\_\_\_

Describe what you did to yourself **on that occasion** (Please give as much detail as you can – for example, the name of the drug taken in an overdose).

4. Thinking about the **first time** you took an overdose or tried to harm yourself, was this before or after you lost a loved one due to any cause of death?

- Before the bereavement
- After the bereavement

5. When was the **last time** you took an overdose or tried to harm yourself?

- Less than a month ago       Between a month and a year ago       More than a year ago

6. Can you remember the date when you took your **last** overdose/tried to harm yourself (if you cannot remember the precise date, please provide the month or as much information as possible)? \_\_\_\_\_

Describe what you did to yourself **on that occasion** (Please give as much detail as you can – for example, the name of the drug taken in an overdose).

--

7. Do any of the following reasons help to explain why you last took an overdose or harmed yourself in some other way? *Please select all that apply.*

	No	Yes
I wanted to show how desperate I was feeling	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to die	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to punish myself	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to frighten someone	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get my own back on someone	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get relief from a terrible state of mind	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to find out whether someone really loved me	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to get some attention	<input type="checkbox"/>	<input type="checkbox"/>

8. How many times have you taken an overdose or tried to harm yourself?

\_\_\_\_\_

9. Do any of the following methods describe what you did to yourself **on any occasion** you ever took an overdose/tried to harm yourself? *Please tick all that apply.*

	<input type="checkbox"/>
Cutting	<input type="checkbox"/>
Overdose	<input type="checkbox"/>
Scratching yourself	<input type="checkbox"/>
Punching yourself or a wall/window	<input type="checkbox"/>
Banging your head	<input type="checkbox"/>
Burning yourself	<input type="checkbox"/>
Biting yourself	<input type="checkbox"/>
Preventing wounds from healing	<input type="checkbox"/>
Sticking sharp objects into yourself	<input type="checkbox"/>
Pulling out your hair	<input type="checkbox"/>
Rubbing glass on to your skin	<input type="checkbox"/>
Poisoning yourself	<input type="checkbox"/>
Don't know/Prefer not to say	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>

- 10. Have you ever had thoughts of purposely hurting yourself without wanting to die? (for example, cutting or burning)**

No Yes

b. If yes, was this before or after you lost a loved one due to any cause of death?

 Before the bereavement After the bereavement Before and after the bereavement

**11. Have you ever had thoughts of killing yourself?**

 No Yes

b. If yes, was this before or after you lost a loved one due to any cause of death?

 Before the bereavement After the bereavement Before and after the bereavement

---

**This is the end of the questionnaire.  
Thank you for taking the time to complete this.**



*If you feel that the survey has highlighted issues that you would like to speak to someone about, please see the details of resources you can contact in the Useful Contacts pamphlet provided to you.*

## Only for participants completing the CaTS:

On a scale from 1 – 5, how confident are you about the accuracy of your recollections of the first time you self-harmed or thought about self-harm? *Please circle one number.*

1

2

3

4

5

---

Not at all  
confident

Extremely  
confident

On a scale from 1 – 5, how confident are you about the accuracy of your recollections of the last time you self-harmed or thought about self-harm? *Please circle one number.*

1

2

3

4

5

---

Not at all  
confident

Extremely  
confident

**Appendix D. List of Card Sort Task for Self-Harm (CaTS) Items  
(reproduced from Townsend et al., 2016)**

Code	Card item
	<b>Thoughts</b>
A01	I wanted to die
A02	I was not afraid of death
A03	There was no one to turn to for help
A04	I could not trust anyone
A05	I struggled to make decisions
A06	I could not think of anything else to do
A07	I wanted to kill myself
A08	I could not solve a problem I faced
A09	I could not tell anyone how I was feeling
A10	No one listened to me or took me seriously
A11	I thought about being very badly treated as a young child
A12	I trusted a caregiver
<sup>a</sup> A13	I had flashbacks about something bad that happened
	<b>Feelings</b>
B01	I was angry
B02	I felt I would not be able to change myself in the future
B03	The mental pain was unbearable
B04	I felt depressed and sad
B05	I felt very anxious
B06	I felt worthless
B07	I felt disgusting
B08	I felt exhausted
B09	I felt energized
B10	I hated myself
B11	I felt hopeful about the future
B12	I felt I could change for the better in the future
B13	I felt I could not change for the better in the future
B14	I felt trapped
B15	I felt defeated

B16	I felt I could not escape from feelings or situations
B17	I felt like a burden on people
B18	I felt very hopeless about the future
B19	I felt humiliated
B20	I felt like I did not belong
B21	I felt ignored
B22	I felt rejected
B23	I felt abandoned
B24	I did not know what I was feeling
B25	I felt numb
<sup>a</sup> B26	I felt ashamed
	<b>Events</b>
C01	I was being abused physically
C02	I was being abused mentally
C03	I had an argument with my friend
C04	I had an argument with my boyfriend/girlfriend
C05	I had an argument with my parent/caregiver
C06	I got into trouble with the police
C07	I was raped
C08	I knew someone who was self-harming
C09	I was a victim of a crime
C10	Someone I knew killed themselves
C11	Lots of people I knew were doing it
C12	I read about self-harm on the internet
C13	I discussed self-harm in a forum on the internet
C14	I was rejected by my parents
C15	I was taken into foster care
C16	I was taken into a residential care home
C17	I received no support from caregivers
C18	I was bullied
C19	I had a problem at school
C20	I had a problem at work
C21	Someone close to me died

C22	I moved to a different home
C23	Someone close to me left
C24	I moved to a different school
C25	I was having problems in a close relationship
<sup>a</sup> C26	I had a problem at university/college
<sup>a</sup> C27	Someone I knew tried to kill themselves
<sup>a</sup> C28	My home life was not very good
	<b>Behaviours</b>
D01	I was very agitated and restless
D02	I was drunk
D03	I was high on drugs
D04	I had unprotected sex
D05	I was not able to sleep
D06	I was having nightmares
D07	I got involved with a gang
D08	I am insensitive to pain
D09	I was drinking alcohol
D10	I was taking illegal drugs
D11	I planned it carefully
D12	I isolated myself from others
D13	I did other things to hurt myself (starved myself, drank too much)
D14	I had access to the means to hurt myself
D15	I did it on impulse without planning
D16	I got into trouble at school/work
D17	I got into trouble at home
<sup>a</sup> D18	I am used to pain
	<b>Services and support</b>
E01	Someone listened to me and took me seriously
E02	I received therapy which helped
E03	I received therapy which did not help
E04	I talked to a friend which helped
E05	I talked to a friend which did not help
E06	I talked to my caregivers which helped

E07	I talked to my caregivers which did not help
E08	I saw my GP which helped
E09	I saw my GP which did not help
E10	I phoned a helpline which helped
E11	I phoned a helpline which did not help
E12	I went to counselling which helped
E13	I went to counselling which did not help
E14	I read a self-help book – it helped
E15	I read a self-help book – it did not help
E16	I talked to a teacher which helped
E17	I talked to a teacher which did not help
E18	I talked to a social worker which helped
E19	I talked to a social worker which did not help
E20	I received help and support from a user-led service (e.g. Harmless)
E21	I depended on a caregiver for help and support
<sup>a</sup> E22	I talked to a boyfriend/girlfriend which helped
<sup>a</sup> E23	I talked to a boyfriend/girlfriend which did not help
<sup>a</sup> E24	I talked to a mental health support worker which helped
<sup>a</sup> E25	I talked to a mental health support worker which did not help
	<b>Afterwards</b>
F01	I went to hospital for overdose or self-injury
F02	I felt worse after self-harm
F03	Self-harm stopped me from killing myself
F04	A & E staff were friendly and understanding
F05	A & E staff were not friendly and understanding
F06	I felt better after self-harm
<sup>a</sup> F07	I felt no different after self-harm
	<b>Time cards</b>
[6M]	6 months before
[1M]	1 month before
[1W]	1 week before
[1D]	1 day before
[IH]	1 hour before

[SH]	1 self-harmed Afterwards
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*Note.* Categories (thoughts, feelings, behaviours etc.) are used to group cards into smaller sets to present to participants

<sup>a</sup>Card items added by participants

## Appendix E. Study 2 Participant Information Sheet & Consent Form

### Participant Information Sheet

**Name of department:** School of Psychological Sciences and Health, University of Strathclyde

**Title of the study:** Life Events and Wellbeing in Young People

**Dear Pupil,**

My name is Laura and I am a student at the University of Strathclyde. I am interested in learning more about how young people feel and the experiences they have, so I would like to invite you to take part in a study. Below I have given some more information about the study. Please take some time to read it and ask any questions you may have, before you decide whether you would like to take part. My contact details, as well as the contact details for my supervisors, are shown at the end of this sheet.

#### **What is the purpose of this investigation?**

We are interested in learning more about how things that may happen in young people's lives, such as experiences of losing someone important to illness or other causes, affect wellbeing. We are asking pupils in Scottish secondary schools to complete a questionnaire so that we can learn more about the issues faced by young people.

#### **Do you have to take part?**

No you do not have to take part. It is completely up to you to decide if you would like to take part in the study. If you decide to take part, you can still change your mind later. If you do change your mind, you will not be asked to explain why, and in this case you would simply return to your normal school lesson as arranged by your teacher.

#### **What will you do in the project?**

If you decide to take part, you will be asked to sign a consent form to show us that you agree to take part in the study, and understand what you are being asked to do. You will then be invited to complete a written paper-questionnaire that will take approximately 35 minutes. Questions will be asked about different thoughts and feelings you may have experienced. This includes questions about your mood, life events (such as experience with the death of a friend or family member, and self-harm), and about your life in general. You will complete the questionnaire individually, and nobody will be able to identify who you are from your answers. Most questions require only tick-box style responses. There are no right or wrong answers, and you do not need to answer any questions which make you feel uncomfortable or which you do not understand. At the end of the questionnaire, you will be given a sealable envelope to put your completed forms in. This is to make sure that nobody other than myself or my supervisors will be able to see what you said.

The information you give in this study will be anonymous – this means that you will not be asked to provide your name or any other personal details on your questionnaire. Instead, we will ask you to make a unique code based on information only known to you. This way, you can contact us if you would like to have your data removed from the study at a later date. We will also be running a second follow-up study at some stage in the future (approximately 6 months from now), so if you would like to take part in the follow-up, we can then link your responses from both time points using this code. It is your decision whether you participate in this study or in the follow-up, and your answers will continue to remain anonymous in both events.

#### **Why have you been invited to take part?**

We are inviting you to take part because you are a secondary school pupil in Scotland between the

ages of 12-17 years or in years S1 to S6. If you have experienced the death of someone important in the last 6 months, we would kindly ask you not to take part, to minimise any potential upset about a recent loss.

**What are the potential risks to you in taking part?**

Because this research will be asking questions about how you feel and your experiences with death or self-harm, we understand that some of the questions may be upsetting for some people. You do not have to answer any questions that you don't want to and you do not have to share any detail that you don't want to share with us. If you find yourself feeling uncomfortable during the study, you can stop at any time without having to explain why.

We will be providing all pupils who participate with a document to take away, which lists contact details of advice and support organisations you can contact, should you feel the need to speak to someone. If you think you are likely to become distressed by the nature of this study, we would advise you not to take part. You can speak to someone you trust, including a teacher or staff member at your school, should you feel the need.

Please note that you, your parents or your teachers will not get any feedback on your answers.

**What happens to the information in the project?**

The information gathered in this study will be kept confidential, which means we will not share any information which can be used to identify you with anyone. The completed paper survey will only be seen by the researchers, and will be stored in secure, lockable filing spaces within the University of Strathclyde. The computerised data will be stored on secure, password-protected computers. The data will also be stored online where it might be looked at by other researchers, but they won't know which answers are yours.

You will be able to withdraw your data from being included in the study until August 2018. After this, I will be writing up the results as part of my degree, and I might present the results of the study to other researchers.

Please note that the University of Strathclyde is registered with the Information Commissioner's Office who implements the Data Protection Act 1998. All personal data on participants will be processed according to the Data Protection Act 1998.

**What happens next?**

If you have any questions or concerns about taking part in the study (or during or after the study), feel free to contact me or my supervisors at the details provided below.

If you decide you would like to be involved in the project, you will be asked to sign a consent form, indicating you agree to take part in this study. If you decide you do not wish to take part in the project, thank you for your time.

If you would like to be told the results of the study, please let me know using the contact details below.

Thank you for taking the time to read this!

**Laura del Carpio (Researcher)**

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**Dr. Susan Rasmussen (Chief  
Investigator/Supervisor)**

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**Dr. Sally Paul (Supervisor)**

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141 St James Road  
Glasgow, G4 0LT  
Email: [sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)

This investigation was granted ethical approval by the University of Strathclyde Ethics Committee.

If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact:

Secretary to the University Ethics Committee  
Research & Knowledge Exchange Services  
University of Strathclyde  
Graham Hills Building  
50 George Street  
Glasgow, G1 1QE  
Telephone: 0141 548 3707  
Email: [ethics@strath.ac.uk](mailto:ethics@strath.ac.uk)

## Consent Form for Pupils

**Name of department:** School of Psychological Sciences and Health, University of Strathclyde

**Title of the study:** Life Events and Wellbeing in Young People

- I have read and understood the information sheet for the above study, and the researcher has answered any questions I might have, and I have understood the answers I was given.
- I understand that it is my choice about whether or not to take part in this study, and that I am free to stop at any time without having to explain why. If I decide to withdraw from the study and I don't want my data to be used, any data which have been collected from me will be destroyed.
- I understand that I can ask for my data to be removed from the study any time before August 2018.
- I understand that I do not need to respond to every question in the study. For example, I can skip any survey questions which I feel uncomfortable about.
- I understand that my responses will be confidential, meaning that my personal information will be kept private and not shared with anyone.
- I agree to be a participant in the above project.

(PRINT NAME):	School:
Signature of Participant:	Date:

## **Appendix F. Study 2 Parent/Guardian Information Sheet and Consent Form**

### **Letter for Parents or Guardians**

**Name of department:** School of Psychological Sciences and Health, University of Strathclyde

**Title of the study:** Life Events and Wellbeing in Young People

**Dear Parent or Guardian,**

My name is Laura and I am a doctoral researcher at the University of Strathclyde, doing my PhD in Psychology. I am currently working on a project looking at life events and wellbeing in adolescents. The study is being supervised by Dr. Susan Rasmussen and Dr. Sally Paul, who are lecturers at the university and have many years of experience working in this field. I am writing to request your permission to invite your child to take part in the study. Below I have given some more information about the project to help you make a decision. Please get in touch if there is anything that is not clear or if you would like more information. My contact details are listed below. Thank you for taking time to read this.

#### **What is the purpose of this investigation?**

We are interested in learning more about how events that may occur in young people's lives, such as experiences of bereavement, affect their overall wellbeing. We know that adolescence is a time of significant physical and psychological changes, but less is known about the impact of loss on a young person, despite it being a common occurrence in many of their lives. We are asking pupils in Scottish Secondary Schools across all participating local authorities to complete a survey so that we can learn more about the issues faced by young people and how it impacts on their wellbeing.

#### **Does your child have to take part?**

No, they do not. The decision of whether your child will be asked to participate is yours, and we will of course ask your child whether they consent to being involved. Both you, and your child, can change your mind about their participation in the study. Your child can withdraw from the study at any point once they have begun, and will not be asked to give an explanation.

#### **What will your child do in the project?**

If both you and your child agree that they can take part, they will attend an initial meeting where the nature of the study will be explained to them and all other interested pupils, and any questions will be answered. They will also be given information to take home with them to help them make a careful decision on whether or not to participate. Approximately two weeks later, those wishing to take part will then be asked to sign a consent form and complete a questionnaire lasting around 35 minutes during a school lesson. Questions will be asked about different thoughts and feelings they may have experienced. This includes questions about their mood, feelings, and life events such as experience with the death of a friend or family member and self-harm. They will complete the questionnaire individually, and most questions require only tick-box style responses. Your child does not need to answer any questions they do not wish. The survey has been designed to protect your child's privacy, so no names will be written anywhere on the questionnaire, and their responses will only be seen by members of the research team. Your child is under no obligation to take part, and whether or not they choose to do so will have no impact on their academic performance.

We will be conducting a follow-up study at some stage in the future (approximately 6 months later), so we would ask your child again at that time if they would like to take part, which would involve completing a similar questionnaire.

#### **Why has your child been invited to take part?**

We are inviting pupils to take part from all participating secondary schools in Scotland, between the ages of 12-17 years, or in years S1 to S6. We kindly ask that children who have been bereaved within the last 6 months do not take part, to minimise any potential upset about a recent loss.

#### **What are the potential risks to your child in taking part?**

Because this research will be asking questions about how your child feels and their experiences with death or self-harm, we understand that some of the questions may be sensitive for some people. They do not have to answer any questions they don't want to or share any detail that they don't want to share. If your child wishes, they can withdraw from the study at any time without having to give an explanation.

Because the responses will be confidential and anonymous, it will not be possible to identify any individuals from the questionnaire. We will be providing all pupils who participate with a document to take away which lists contact details of advice and support organisations that can be contacted, should any child feel the need to speak to someone about any concerns (a copy of this document is attached). Please note that the questions included in this study are not diagnostic tools, and we will not be providing any feedback on individual answers.

#### **What happens to the information in the project?**

The information gathered in this study will be kept confidential, and questionnaire responses will be anonymised by using a code, so pupils cannot be identified by the answers they give. The completed survey will only be seen by the researchers, and stored in secure, lockable filing spaces within the University of Strathclyde. The computerised data will be stored on secure, password-protected computers. If you or your child changes their mind about their data being included in the study, it will be possible to withdraw their data from the project until August 2018, after which it will be analysed and written up as part of a doctoral thesis. The results may also be submitted to academic journals or academic conferences and events. No identifying information will be included in any publications or presentations resulting from this project.

We recognise that data availability is for the public good. Therefore, we will archive the anonymised data with the UK Data Service indefinitely after the project, where other researchers will be able to access it. Data will also be linked to the university's Research Data Repository. This data will be anonymous, and no personal information will be shared. The University of Strathclyde is registered with the Information Commissioner's Office who implements the Data Protection Act 1998. All personal data on participants will be processed in accordance with the provisions of the Data Protection Act 1998.

#### **Who has reviewed and approved the study?**

I am a postgraduate researcher and a member of the Protection of Vulnerable Groups (PVG) Scheme by Disclosure Scotland in respect of regulated work with children and adults. I will be supervised by experienced researchers who have extensive experience of conducting these types of studies within secondary schools and to date have never encountered any problems with this kind of research. This project has been granted ethical approval from the University of Strathclyde Ethics Committee, ensuring that it meets ethical guidelines. Permission has been granted from the school's Head Teacher as well as the Local Education Authority to carry out this investigation, and we will coordinate with the school to ensure minimal disruption within the learning environment.

#### **What happens next?**

We would appreciate if you would permit your child to participate in this project, as we believe it will

add greatly to our understanding of young people's experiences with loss and wellbeing. Our experience tells us that adolescents enjoy the process of participating in such research. While the school's Head Teacher has kindly given us permission to carry out the study in the school, we require your individual permission to allow your child to participate.

If you are happy for your child to be involved in the project, please sign the attached consent form and return to the school **within one week**. Otherwise, your child will **not** be included in the study. If you have any questions or concerns you would like to discuss before making a decision, please do not hesitate to contact myself or my supervisors at the details listed below. If you do not wish your child to be involved in the project, we thank you for your attention.

If you would like to be told the results of the study, please let me know using the contact details below.

Thank you in advance for your interest and time.

Yours sincerely,

Laura del Carpio

#### Researcher contact details:

**Laura del Carpio (Researcher)**

School of Psychological  
Sciences and Health  
University of Strathclyde  
6<sup>th</sup> Floor, Graham Hills Building  
40 George Street  
Glasgow, G1 1QE  
Email: [laura.del-carpio@strath.ac.uk](mailto:laura.del-carpio@strath.ac.uk)

**Dr. Susan Rasmussen (Chief Investigator/Supervisor)**

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**Dr. Sally Paul (Supervisor)**

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141 St James Road  
Glasgow, G4 0LT  
Email: [sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)

This investigation was granted ethical approval by the University of Strathclyde Ethics Committee. If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact:

Secretary to the University Ethics Committee, Research & Knowledge Exchange Services  
University of Strathclyde, Graham Hills Building, 50 George Street, Glasgow, G1 1QE  
Telephone: 0141 548 3707  
Email: [ethics@strath.ac.uk](mailto:ethics@strath.ac.uk)

Please ask your child to return this form to the school if you allow them to participate in this project. Thank you.

## Consent Form for Parents

**Name of department:** School of Psychological Sciences and Health, University of Strathclyde

**Title of the study:** Life events and adolescent wellbeing

- I confirm that I have read and understood the information sheet for the above project.
- I have had the opportunity to ask questions, and the researcher has answered any queries to my satisfaction.
- I understand that my consent and my child's participation is voluntary, and that both I and my child can withdraw our consent about their participation at any time. If I or my child exercises the right to withdraw consent and don't want their data to be used, any data which have been collected from him/her will be destroyed.
- I understand that I or my child can withdraw his/her data from the study any time before August 2018.
- I understand that my child is under no obligation to respond to all aspects of the investigation: for example, they can refrain from answering any survey question(s) which they feel uncomfortable about.
- I understand that any information recorded in the investigation will remain confidential and no information that identifies me or my child will be made publicly available.
- I consent to allowing my child to take part in the study.

Name of Child:	Child's Year Group:
Print Name of Parent/Guardian:	
Signature of Parent/Guardian:	Date:

## Appendix G. Study 3 Participant Information Sheet (Community) Life After Someone Important Has Died

### Information Sheet for Young People

My name is Laura and I am a student at the University of Strathclyde. I am interested in learning more about how young people feel, and the experiences they have following the death of someone important. I would like to invite you to take part in a study to share your experiences.

Before you decide whether to take part, it is important for you to understand why this research is being done, and what it will involve. Please take some time to read the information carefully, and ask any questions you want to. Feel free to discuss it with others, such as your parents or guardians, or people who support you. My contact details, as well as the details of my supervisors, are given at the end of this sheet.

#### What is the purpose of this study?

I am interested in learning more about how the experience of someone important dying affects young people. Previous studies have found that the death of someone important is a common experience among young people, but not much is known about the impact it can have on someone's day to day life, thoughts and feelings, and behaviours such as self-harm. I am asking young people in Scotland to share their experiences with me in a face-to-face interview to learn more about this topic.

#### Do you have to take part?

No, you do not have to take part. It is completely up to you if you would like to participate in the study. If you decide to take part, you can still change your mind later, and you will not be asked to explain why. If you do not wish to take part, this will not affect the way you are treated or any support you receive.

#### What will you do in the project?

This study has three parts. You do not have to take part in all of these and only some young people will be invited to do the third part of the study. I have described all three parts below so you know exactly what you are being invited to do.

**Part 1: An interview about your experiences of losing someone:** The interview will last around 40 minutes. During this time I will ask you a few questions about yourself (such as your age, sex, gender, ethnicity, and what area you live in), and how you are feeling (by circling a number on a line, at the start and end of the interview). I will then ask about your life in general, about the person who died, and how their death has affected you. There are no right or wrong answers. You can take as long as you wish, and you do not need to answer any questions which make you feel uncomfortable. If you agree, I would like to audio-record our conversation so that I can accurately remember what you said, and this recording will be destroyed once it has been typed up. If you do not wish to be audio-recorded, I will take written notes during our conversation, and these will also be destroyed once they have been typed up. If you wish, you can have an adult present throughout the interview (such as a parent or guardian), if this makes you feel more comfortable. As a thank you for your time, you will receive a £10 shopping voucher for participating in the interview.

**Part 2: A questionnaire about self-harm:** After the interview, you will be asked to complete a brief paper questionnaire about your experiences with self-harm, which should take about 5 minutes. Most questions only ask for tick-box responses, there are no right or wrong answers, and you do not need to answer any questions which you do not want to.

**Part 3: A card-sorting task:** Participants who let me know that they have self-harmed or had thoughts about self-harm in the past will also be invited to take part in a card organising activity. This involves sorting cards which describe the thoughts, feelings, behaviours and events that may be important to someone leading up to their self-harm thoughts or actions. I will ask this about the first time the person has experienced this, and the most recent time. I would also like to take a photo of the cards once they have been sorted (you will not be visible in this photo). This task takes around 20 minutes, and can either be done on the same day as the interview after having a break, or at a later date to be arranged, as preferred. Completing this task is voluntary, and if you are invited to do this, it is up to you if you wish to take part.

Where will the study be done? If you decide to take part, I will arrange a suitable time to meet you in a place that is convenient for you (such as a room within a local school or university, a local community venue, or your home). I will ask you to sign a form to say that you agree to take part.

### Why have you been invited to take part?

You have been invited to take part because you are a young person between 12 and 18 years old living in Scotland, who speaks English, and have experienced the death of someone important to you during your lifetime due to any cause of death. If you experienced the death within the last 6 months, you are not able to take part at this time, as I don't wish to cause any additional upset about a recent loss.

### What are the potential risks to you in taking part?

This research will be asking questions about how you feel and your experiences with death or self-harm, and because of this, some of the questions may be upsetting or make you feel uncomfortable. You do not need to answer any questions that make you feel this way, and you do not have to share any details that you don't want to share with me. If you find yourself feeling uncomfortable during the study, you can stop at any time without having to explain why.

I will be giving everyone who takes part in this study a list of advice and support organisations that they can contact if they want to speak to someone. If you think you might become upset by the interview, I would advise you not to take part.

### What happens to the information in the project?

If you wish, you will be given the opportunity to check the records I type up from our conversation, or a shorter summary of the interview, once it has been typed up. If you choose to do this, I will arrange this in a way that suits you.

The information collected in this study will be kept confidential, which means I will not share anything which can be used to identify you with anyone. Details like your name, the people you tell me about, or organisations you are part of will be removed so nobody can tell it is you. However, if I become aware that there is an immediate danger of serious harm to you or someone else, I would have to pass this information on to an adult in order to protect you or others. If this happens, I will discuss it with you first.

The completed paper forms will only be seen by me and my supervisors, and will be stored in secure, lockable filing spaces within the University of Strathclyde. All electronic data will be stored digitally on a secure server. Audio-recordings will be deleted when they have been typed up. At the end of the study, the data will be stored online after removing any information which could identify you, where it might be looked at by other researchers, but they won't know which answers are yours. You can ask me to remove your data from the study if you want, any time until October 2019. After this, I will be writing up the results as part of my degree, and I might present the results of the study to other researchers.

### What happens next?

If you have any questions or concerns about taking part in the study, feel free to contact me or my supervisors at the details provided below, or by leaving your contact details at: <https://tinyurl.com/bereav>

If you are interested in taking part, please let me know in one of the following ways:

- Visiting <https://tinyurl.com/bereav> and providing your contact details
- Sending a direct email to: [laura.del-carpio@strath.ac.uk](mailto:laura.del-carpio@strath.ac.uk) with your contact details
- Completing the attached consent form and handing it back to the staff member or person who told you about this study, if you got this form from them.



I will then contact you to answer any questions you may have, and if you decide you would like to be involved, we will arrange a time and place to meet. You can change your mind about participating at any time, even after you agree to take part. *(Please note that if you are between 12 and 15 years old, I first require your parent or guardian's permission to allow you to participate. If this is the case and they have not yet provided their consent to allow you to take part, please ask them to read the Parent/Guardian Information Sheet. You may have received a paper copy from the staff member or person who told you about this study, or a copy can be accessed at: <https://tinyurl.com/bereav>).*

If you decide you do not wish to take part in the project, thank you for your time.

If you would like to be told the results of the study, please let me know using the contact details below.

**Thank you for taking the time to read this!**

---

**Laura del Carpio (Researcher)**

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University of Strathclyde  
6<sup>th</sup> Floor, Graham Hills Building  
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**Project Supervisors:**

**Dr. Susan Rasmussen (Chief Investigator/Supervisor)**

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**Dr. Sally Paul (Supervisor)**

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Please note that the University of Strathclyde is registered with the Information Commissioner's Office who implements the GDPR (General Data Protection Regulation) and the Data Protection Act 2018. All personal data on participants will be processed according to this legislation.

This investigation was granted ethical approval by the University of Strathclyde Ethics Committee. If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact: Secretary to the University Ethics Committee, Research & Knowledge Exchange Services, University of Strathclyde, Graham Hills Building, 50 George Street, Glasgow, G1 1QE. Telephone: 0141 548 3707. Email: [ethics@strath.ac.uk](mailto:ethics@strath.ac.uk)

## Study 3 Participant Information Sheet (Schools)

# Life After Someone Important Has Died

## Information Sheet for Young People

My name is Laura and I am a student at the University of Strathclyde. I am interested in learning more about how young people feel, and the experiences they have following the death of someone important. I would like to invite young people who have experienced such a loss to take part in a study to share their views, and this information sheet provides further details on this process.

If you feel this is not applicable to you (for example, if you have not experienced the death of someone important to you), please feel free to disregard the information on this sheet.

If this research is relevant to you and you would like to hear more about the study, it is important for you to understand why this research is being done, and what it will involve. Please take some time to read the information carefully, and ask any questions you want to before you decide whether to be involved. Feel free to discuss it with others, such as your parents or guardians, or people who support you. My contact details, as well as the details of my supervisors, are given at the end of this sheet.

### What is the purpose of this study?

I am interested in learning more about how the experience of someone important dying affects young people. Previous studies have found that the death of someone important is a common experience among young people, but not much is known about the impact it can have on someone's day to day life, thoughts and feelings, and behaviours such as self-harm. I am asking young people in Scotland to share their experiences with me in a face-to-face interview to learn more about this topic.

### Do you have to take part?

No, you do not have to take part. It is completely up to you if you would like to participate in the study. If you decide to take part, you can still change your mind later, and you will not be asked to explain why. If you do not wish to take part, this will not affect the way you are treated or any support you receive.

### What will you do in the project?

This study has three parts. You do not have to take part in all of these and only some young people will be invited to do the third part of the study. I have described all three parts below so you know exactly what you are being invited to do.

**Part 1: An interview about your experiences of losing someone:** The interview will last around 40 minutes. During this time I will ask you a few questions about yourself (such as your age, sex, gender, ethnicity, and what area you live in), and how you are feeling (by circling a number on a line, at the start and end of the interview). I will then ask about your life in general, about the person who died, and how their death has affected you. There are no right or wrong answers. You can take as long as you wish, and you do not need to answer any questions which make you feel uncomfortable. If you agree, I would like to audio-record our conversation so that I can accurately remember what you said, and this recording will be destroyed once it has been typed up. If you do not wish to be audio-recorded, I will take written notes during our conversation, and these will also be destroyed once they have been typed up. If you wish, you can have an adult present throughout the interview (such as a parent or guardian), if this makes you feel more comfortable. As a thank you for your time, you will receive a £10 shopping voucher for participating in the interview.

**Part 2: A questionnaire about self-harm:** After the interview, you will be asked to complete a brief paper questionnaire about your experiences with self-harm, which should take about 5 minutes. Most questions only ask for tick-box responses, there are no right or wrong answers, and you do not need to answer any questions which you do not want to.

**Part 3: A card-sorting task:** Participants who let me know that they have self-harmed or had thoughts about self-harm in the past will also be invited to take part in a card organising activity. This involves sorting cards which describe the thoughts, feelings, behaviours and events that may be important to someone leading up to their self-

harm thoughts or actions. I will ask this about the first time the person has experienced this, and the most recent time. I would also like to take a photo of the cards once they have been sorted (you will not be visible in this photo). This task takes around 20 minutes, and can either be done on the same day as the interview after having a break, or at a later date to be arranged, as preferred. Completing this task is voluntary, and if you are invited to do this, it is up to you if you wish to take part.

Where will the study be done? If you decide to take part, I will arrange a suitable time to meet you in a place that is convenient for you (such as a room within a local school or university, a local community venue, or your home). I will ask you to sign a form to say that you agree to take part.

### Why have you been invited to take part?

You have been invited to take part because you are a young person between 12 and 18 years old living in Scotland, who speaks English, and have experienced the death of someone important to you during your lifetime due to any cause of death. If you experienced the death within the last 6 months, you are not able to take part at this time, as I don't wish to cause any additional upset about a recent loss.

### What are the potential risks to you in taking part?

This research will be asking questions about how you feel and your experiences with death or self-harm, and because of this, some of the questions may be upsetting or make you feel uncomfortable. You do not need to answer any questions that make you feel this way, and you do not have to share any details that you don't want to share with me. If you find yourself feeling uncomfortable during the study, you can stop at any time without having to explain why.

I will be giving everyone who takes part in this study a list of advice and support organisations that they can contact if they want to speak to someone. If you think you might become upset by the interview, I would advise you not to take part.

### What happens to the information in the project?

If you wish, you will be given the opportunity to check the records I type up from our conversation, or a shorter summary of the interview, once it has been typed up. If you choose to do this, I will arrange this in a way that suits you.

The information collected in this study will be kept confidential, which means I will not share anything which can be used to identify you with anyone. Details like your name, the people you tell me about, or organisations you are part of will be removed so nobody can tell it is you. However, if I become aware that there is an immediate danger of serious harm to you or someone else, I would have to pass this information on to an adult in order to protect you or others. If this happens, I will discuss it with you first.

The completed paper forms will only be seen by me and my supervisors, and will be stored in secure, lockable filing spaces within the University of Strathclyde. All electronic data will be stored digitally on a secure server. Audio-recordings will be deleted when they have been typed up. At the end of the study, the data will be stored online after removing any information which could identify you, where it might be looked at by other researchers, but they won't know which answers are yours. You can ask me to remove your data from the study if you want, any time until October 2019. After this, I will be writing up the results as part of my degree, and I might present the results of the study to other researchers.

### What happens next?

If you have any questions or concerns about taking part in the study, feel free to contact me or my supervisors at the details provided below, or by leaving your contact details at: <https://tinyurl.com/bereav>

If you are interested in taking part, please let me know in one of the following ways:

- Visiting <https://tinyurl.com/bereav> and providing your contact details
- Sending a direct email to: [laura.del-carpio@strath.ac.uk](mailto:laura.del-carpio@strath.ac.uk) with your contact details
- Completing the attached consent form and handing it back to the staff member or person who told you about this study, if you got this form from them.

I will then contact you to answer any questions you may have, and if you decide you would like to be involved, we will arrange a time and place to meet. You can change your mind about participating at any time, even after you agree to take part. *(Please note that if you are between 12 and 15 years*



old, I first require your parent or guardian's permission to allow you to participate. If this is the case and they have not yet provided their consent to allow you to take part, please ask them to read the Parent/Guardian Information Sheet. You may have received a paper copy from the staff member or person who told you about this study, or a copy can be accessed at: <https://tinyurl.com/bereav>).

If you decide you do not wish to take part in the project, thank you for your time.

If you would like to be told the results of the study, please let me know using the contact details below.

## Thank you for taking the time to read this!

---

### **Laura del Carpio (Researcher)**

School of Psychological Sciences and Health  
University of Strathclyde  
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## Participant Consent Form

### Study: Life After Someone Important Has Died

School of Psychological Sciences and Health, University of Strathclyde

- I have read and understood the information sheet for the above study, and the researcher has answered any questions I might have, and I have understood the answers I was given.
- I understand that it is my choice about whether or not to take part in this study, and that I am free to stop at any time without having to explain why. If I decide to withdraw from the study and I don't want my data to be used, any data which have been collected from me will be destroyed.
- I understand that I can ask for my data to be removed from the study any time before October 2019.
- I understand that I do not need to respond to every question in the study. For example, I can choose to not answer certain interview questions or skip any survey questions which I feel uncomfortable about. I also do not need to take part in the Card Sort Task if I am invited to do so and do not wish to take part.
- I understand that my responses will be confidential, meaning that my personal information will be kept private and not shared with anyone.
- I understand that if I disclose that I or someone else is at immediate risk of serious harm, the researcher will have to pass this information on to my parent/guardian or a professional, in order to ensure my safety or that of someone else.
- I understand that I will have the opportunity to check the records that are typed up from my interview. If I wish to do this, the researcher will arrange this with me.

#### Please select from the following options:

I agree to my interview being audio recorded.

I agree to my card sort task responses being photographed, if I am invited to and choose to do this activity.

I agree to be a participant in the above project.

<b>Print Name of Participant:</b>	<b>Signature of Participant:</b>
<b>Date:</b>	<b>Email address and telephone where you can be contacted:</b>

## Appendix H. Study 3 Parent/Guardian Information Sheet and Consent Form (Community)

### Life After Someone Important Has Died

### Information Sheet for Parents/Guardians

My name is Laura and I am a PhD student at the University of Strathclyde, doing my PhD in Psychology. I am currently working on a project looking at the experiences of young people following the death of someone important. The study is being supervised by Dr Susan Rasmussen and Dr Sally Paul, who are lecturers at the university and have many years of experience working in this field. I would like to request your permission to invite your child to take part in the study.

I have given some more information about the project below to help you make a decision. Please get in touch if there is anything that is not clear or if you would like more information. My contact details are listed below. Thank you for taking the time to read this.

#### What is the purpose of this study?

I am interested in learning more about how the experience of someone important dying affects young people. Previous studies have found that bereavement is a common experience among young people, but not much is known much about the impact it can have on someone's day to day life, thoughts and feelings, and behaviours such as self-harm. I am asking young people in Scotland to share their experiences with me in a face-to-face interview to learn more about this topic.

#### Does your child have to take part?

No, they do not. The decision of whether your child will be allowed to participate is yours, and I will of course ask your child whether they consent to being involved. Both you and your child can change your mind about their participation in the study. Your child can withdraw from the study at any point once they have begun, and will not be asked to give an explanation.

#### What will your child do in the project?

This study has three parts. Your child does not have to take part in all of these, and only some young people will be invited to do the third part of the study. I have described all three parts below so you know exactly what your child is being invited to do.

**Part 1:** An interview about their experiences of losing someone: The interview will last around 40 minutes. During this time I will ask your child a few questions about themselves (such as their age, sex, gender, ethnicity, and what area they live in), and how they are feeling. I will then ask about their life in general, about the person who died, and how their death has affected them. Your child does not need to answer any questions they do not wish, and they do not need to answer any questions which make them feel uncomfortable. If your child agrees, I would like to audio-record this conversation so that I can accurately remember what was said, and this recording will be destroyed once it has been transcribed. If they do not wish to be audio-recorded, I will take written notes during our conversation, and these will also be destroyed once they have been typed up. If your child wishes, they may choose to have an adult present throughout the session (such as a parent or guardian), if this makes them feel more comfortable. As a thank you for their time, they will receive a £10 shopping voucher for participating in the interview.

**Part 2:** A questionnaire about self-harm: After the interview, your child will be asked to complete a brief paper questionnaire about their experiences with self-harm, which should take about 5 minutes. Most questions require only tick-box style responses, and they do not need to answer any questions which they do not wish to.

**Part 3:** A card-sorting task: Participants who let me know that they have previously self-harmed or had thoughts about self-harm will be invited to take part in a card sorting task. This involves sorting cards which describe the thoughts, feelings, behaviours and events that may be important to someone leading up to their self-harm thoughts or actions. I will ask this about the first time the person has experienced this, and the most recent time. I would also like to take a photo of the cards once they have been sorted (no individuals will be visible in this photo). This task takes around 20 minutes, and can either be done on the same day as the interview after having

a break, or at a later date to be arranged, as preferred. Completing this task is voluntary, and if your child is invited to do this, it is up to them if they wish to take part.

Where will the study be done? If your child decides to take part, I will arrange a suitable time to meet them in a place that is convenient for them (such as a room within a local school or university, a local community venue, or their home). I will ask them to sign a consent form if they agree to take part.

### Why has your child been invited to take part?

I am inviting young people between 12 and 18 years old living in Scotland to take part, who speak English, and have experienced the death of someone important to them during their lifetime due to any cause of death. If your child has been bereaved within the last 6 months, they are not able to take part at this time, as I don't wish to cause any additional upset about a recent loss.

### What are the potential risks to your child in taking part?

Because this research will be asking questions about how your child feels and their experiences with death or self-harm, I understand that some of the questions may be sensitive for some people. They do not have to answer any questions that they don't want to or share any details that they don't want to share. If your child wishes, they can withdraw from the study at any time without having to give an explanation.

I will be providing all young people who participate in this study with a list of advice and support organisations that they can contact should they feel the need to speak to someone. If your child feels they are likely to become distressed by the nature of this study, I would advise them not to take part.

### What happens to the information in the project?

If your child would like to, they will be given an opportunity to check the transcripts or a shorter summary of the interview once it has been typed up. If they choose to do this, I will arrange this in a way that suits them.

The information gathered in this study will be kept confidential, and any identifying information will be anonymised by removing any details that allow them to be identified (such as their name, the people they tell me about, or organisations they are part of). Anything they share with me during the interview will be kept confidential. However, if I become aware that there is an immediate danger of serious harm to them or someone else, I would have to pass this information on to an adult like you or a professional in order to protect them. If this happens, I will discuss it with your child first.

The completed paper forms will only be seen by me and my supervisors, and will be stored in secure, lockable filing spaces within the University of Strathclyde. All electronic data will be stored online. Audio-recordings will be deleted when they have been transcribed. We recognise that data availability is for the public good. Therefore, the data will be archived with the UK Data Service indefinitely after the project, where other researchers will be able to access it. Data will also be linked to the university's Research Data Repository. This data will be pseudo-anonymised so your child cannot be identified, and no personal information will be shared.

### Who has reviewed and approved the study?

I am a postgraduate researcher and a member of the Protection of Vulnerable Groups (PVG) Scheme by Disclosure Scotland in respect of regulated work with children and adults. I will be supervised by experienced researchers who have extensive experience of conducting these types of studies with adolescents and to date have never encountered any problems with this kind of research. This project has been granted ethical approval from the University of Strathclyde Ethics Committee, ensuring that it meets ethical guidelines.

### What happens next?

As your child is under 16 (and in some cases under 18 where required by a participating organisation or school), I require your individual permission to allow them to participate.

If you have any questions or concerns about your child taking part, feel free to contact me or my supervisors at the details provided below. If you are happy for your child to be involved in the project, please let me know in one of the following ways:

- Visiting <https://tinyurl.com/bereav> and providing your consent online
- Signing the attached consent form and returning it by post to the researcher (details listed below)
- Signing the attached consent form and returning it to the organisation or school that informed you or your child about this study (if applicable).

Otherwise, your child will **not** be included in the study. If you have any questions or concerns you would like to discuss before making a decision, please do not hesitate to contact me or my supervisors at the details listed below. If you do not wish your child to be involved in the project, I thank you for your attention.

If you would like to be told the results of the study, please let me know using the contact details below.

Thank you in advance for your interest and time.

---

**Laura del Carpio (Researcher)**

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## Study 3 Parent/Guardian Information Sheet and Consent Form (Schools)

# Life After Someone Important Has Died

## Information Sheet for Parents/Guardians

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We are inviting pupils in your child's school to take part and share their views. If you feel that this research is not applicable to your child (for example, if they have not been bereaved by someone important to them), please feel free to disregard this information sheet.

If this research is relevant to your child and you would like to hear more, I have given some more information about the project below to help you make a decision about your child's participation. Please get in touch if there is anything that is not clear or if you would like more information. My contact details are listed below. Thank you for taking the time to read this.

### What is the purpose of this study?

I am interested in learning more about how the experience of someone important dying affects young people. Previous studies have found that bereavement is a common experience among young people, but not much is known much about the impact it can have on someone's day to day life, thoughts and feelings, and behaviours such as self-harm. I am asking young people in Scotland to share their experiences with me in a face-to-face interview to learn more about this topic.

### Does your child have to take part?

No, they do not. The decision of whether your child will be allowed to participate is yours, and I will of course ask your child whether they consent to being involved. Both you and your child can change your mind about their participation in the study. Your child can withdraw from the study at any point once they have begun, and will not be asked to give an explanation.

### What will your child do in the project?

This study has three parts. Your child does not have to take part in all of these, and only some young people will be invited to do the third part of the study. I have described all three parts below so you know exactly what your child is being invited to do.

**Part 1: An interview about their experiences of losing someone:** The interview will last around 40 minutes. During this time I will ask your child a few questions about themselves (such as their age, sex, gender, ethnicity, and what area they live in), and how they are feeling. I will then ask about their life in general, about the person who died, and how their death has affected them. Your child does not need to answer any questions they do not wish, and they do not need to answer any questions which make them feel uncomfortable. If your child agrees, I would like to audio-record this conversation so that I can accurately remember what was said, and this recording will be destroyed once it has been transcribed. If they do not wish to be audio-recorded, I will take written notes during our conversation, and these will also be destroyed once they have been typed up. If your child wishes, they may choose to have an adult present throughout the session (such as a parent or guardian), if this makes them feel more comfortable. As a thank you for their time, they will receive a £10 shopping voucher for participating in the interview.

**Part 2: A questionnaire about self-harm:** After the interview, your child will be asked to complete a brief paper questionnaire about their experiences with self-harm, which should take about 5 minutes. Most questions require only tick-box style responses, and they do not need to answer any questions which they do not wish to.

Part 3: A card-sorting task: Participants who let me know that they have previously self-harmed or had thoughts about self-harm will be invited to take part in a card sorting task. This involves sorting cards which describe the thoughts, feelings, behaviours and events that may be important to someone leading up to their self-harm thoughts or actions. I will ask this about the first time the person has experienced this, and the most recent time. I would also like to take a photo of the cards once they have been sorted (no individuals will be visible in this photo). This task takes around 20 minutes, and can either be done on the same day as the interview after having a break, or at a later date to be arranged, as preferred. Completing this task is voluntary, and if your child is invited to do this, it is up to them if they wish to take part.

Where will the study be done? If your child decides to take part, I will arrange a suitable time to meet them in a place that is convenient for them (such as a room within a local school or university, a local community venue, or their home). I will ask them to sign a consent form if they agree to take part.

### Why has your child been invited to take part?

I am inviting young people between 12 and 18 years old living in Scotland to take part, who speak English, and have experienced the death of someone important to them during their lifetime due to any cause of death. If your child has been bereaved within the last 6 months, they are not able to take part at this time, as I don't wish to cause any additional upset about a recent loss.

### What are the potential risks to your child in taking part?

Because this research will be asking questions about how your child feels and their experiences with death or self-harm, I understand that some of the questions may be sensitive for some people. They do not have to answer any questions that they don't want to or share any details that they don't want to share. If your child wishes, they can withdraw from the study at any time without having to give an explanation.

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The information gathered in this study will be kept confidential, and any identifying information will be anonymised by removing any details that allow them to be identified (such as their name, the people they tell me about, or organisations they are part of). Anything they share with me during the interview will be kept confidential. However, if I become aware that there is an immediate danger of serious harm to them or someone else, I would have to pass this information on to an adult like you or a professional in order to protect them. If this happens, I will discuss it with your child first.

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If you would like to be told the results of the study, please let me know using the contact details below.

Thank you in advance for your interest and time.

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### **Laura del Carpio (Researcher)**

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### **Project Supervisors:**

#### **Dr. Susan Rasmussen (Chief Investigator/Supervisor)**

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6<sup>th</sup> Floor, Graham Hills Building  
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#### **Dr. Sally Paul (Supervisor)**

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141 St James Road  
Glasgow, G4 0LT  
Email: [sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)

Please note that the University of Strathclyde is registered with the Information Commissioner's Office who implements the GDPR (General Data Protection Regulation) and the Data Protection Act 2018. All personal data on participants will be processed according to this legislation.

This investigation was granted ethical approval by the University of Strathclyde Ethics Committee. If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact: Secretary to the University Ethics Committee, Research & Knowledge Exchange Services, University of Strathclyde, Graham Hills Building, 50 George Street, Glasgow, G1 1QE. Telephone: 0141 548 3707. Email: [ethics@strath.ac.uk](mailto:ethics@strath.ac.uk)

## Parent or Guardian Consent Form for 12-15 Year Olds

### Study: Life After Someone Important Has Died

School of Psychological Sciences and Health, University of Strathclyde

- I have read and understood the information sheet for the above study. I have had the opportunity to ask questions, and the researcher has answered any queries to my satisfaction.
- I understand that my consent and my child's participation is voluntary, and that both I and my child can withdraw our consent about their participation at any time. If I or my child exercises the right to withdraw consent and don't want their data to be used, any data which have been collected from him/her will be destroyed.
- I understand that I or my child can withdraw his/her data from the study any time before October 2019.
- I understand that my child is under no obligation to respond to all aspects of the investigation: for example, they can refrain from answering any interview questions or survey questions which they feel uncomfortable about. They are also not required to take part in the Card Sort Task if invited to do so.
- I understand that any information recorded in the investigation will remain confidential and no information that identifies me or my child will be made publicly available.
- I understand that if my child discloses that they or someone else is at immediate risk of serious harm, the researcher will have to pass this information on to me or a professional, in order to ensure their safety or that of someone else.
- I understand that my child will have the opportunity to check the transcript or a shorter summary of their interview. If they wish to do so, the researcher will arrange this with them.

#### Please select from the following options:

I agree to allow my child's interview to be audio recorded.

I agree to allow my child's card sort task responses to be photographed, if they are invited to and choose to do this activity.

I consent to allowing my child to take part in the study.

<b>Print Name of Parent/Guardian:</b>	<b>Date:</b>
<b>Signature of Parent/Guardian:</b>	<b>Name of Child:</b>

## Appendix I. Study 2 Debrief & Useful Contacts Pamphlet

### Participant Debrief

**Name of department:** School of Psychological Sciences and Health, University of Strathclyde

**Title of the study:** Life Events and Wellbeing in Young People

Thank you very much for taking part in this research study. We are interested in finding out more about adolescents' experiences and views. In particular, we are trying to learn about how many young people experience the death of someone important, and what impact this may have on overall wellbeing. We asked about your coping, social supports, and self-esteem, because these factors may affect how a person deals with a loss.

Please note that you, your parents or your teachers will not get any individual feedback on your answers. However, if you feel that the survey has highlighted a problem that you would like to speak to someone about then please see the details of useful contacts included in the additional information sheet provided to you.

If you would like to discuss this research study further, feel free to contact the researchers whose details are listed below.

Thank you very much for taking part. This research would not be possible without the help of young people like you.

#### Researcher contact details:

**Laura del Carpio (Researcher)**

School of Psychological  
Sciences and Health  
University of Strathclyde  
6th Floor, Graham Hills Building  
40 George Street  
Glasgow, G1 1QE  
Email: [laura.del-carpio@strath.ac.uk](mailto:laura.del-carpio@strath.ac.uk)

**Dr. Susan Rasmussen (Chief Investigator/Supervisor)**

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[s.a.rasmussen@strath.ac.uk](mailto:s.a.rasmussen@strath.ac.uk)

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School of Social Work & Social  
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6th Floor, Lord Hope Building  
141 St James Road  
Glasgow, G4 0LT  
Email: [sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)

## Useful Contacts Information Sheet

### You may also find some of the following websites useful:

[www.youngscot.org](http://www.youngscot.org) National youth information charity. Offers information, opportunities and ideas on all aspects of life, things to do in your local area, and more.

[www.cool2talk.org](http://www.cool2talk.org) Confidential place for young people to freely ask questions about anything affecting them. Responses within 24 hours.

[youngminds.org.uk](http://youngminds.org.uk) Information about emotional wellbeing and mental health, including helpful resources for anyone concerned.

[young.scot/choices-for-life](http://young.scot/choices-for-life) Raising awareness about smoking, alcohol, and drugs as well as online safety and peer pressure.

[respectme.org.uk](http://respectme.org.uk) Anti-bullying service, with advice about bullying and cyberbullying, and what to do.

[www.b-eat.co.uk](http://www.b-eat.co.uk) Support and information for individuals affected by eating disorders.

[www.lgbtyouth.org.uk](http://www.lgbtyouth.org.uk) Scotland's largest youth and community-based organisation offering advice and information for lesbian, gay, and transgender young people.

[talktofrank.com](http://talktofrank.com) National drug education service, with information and support for teenagers and adolescents about drugs.

[www.papyrus-uk.org](http://www.papyrus-uk.org) National charity dedicated to the prevention of young suicide.

[help2makesense.org](http://help2makesense.org) Information on bereavement for young people.

[hopeagain.org.uk](http://hopeagain.org.uk) A safe place for young people experiencing grief to share their stories with others.

For any questions about this research or the study results, contact:

Laura del Carpio (Researcher)  
[laura.del-carpio@strath.ac.uk](mailto:laura.del-carpio@strath.ac.uk)

Dr. Susan Rasmussen (Chief Investigator/Supervisor)  
[s.a.rasmussen@strath.ac.uk](mailto:s.a.rasmussen@strath.ac.uk)

Dr. Sally Paul (Supervisor)  
[sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)



## Life Events and Wellbeing in Young People Study

### USEFUL CONTACTS



If you have been affected by any of the issues raised in this study and wish to speak to someone about it, we would advise you to contact any of the following:

- **Someone you trust**, like a close friend or family member
- A **teacher or counsellor** at your school
- Your **GP surgery or NHS 24** (Telephone: 111), who can advise you about appropriate supports available to you for any mental or physical health concerns



If you would like to speak to someone else about things that may be bothering you, you could also contact one of the following helplines. You will speak to a trained professional who can provide you with information, advice, or just someone to listen:

#### ChildLine

Free, confidential counselling service that offers help and support for children and young people about anything, such as any worries or stressors, none too big or too small. Available 24 hours, 7 days a week, and contactable by telephone, email, or 1-2-1 counsellor chat.

Website: [www.childline.org.uk](http://www.childline.org.uk)

Telephone: 0800 1111 (freephone)

#### Breathing Space

Free, confidential phone service for anyone experiencing low mood, depression, or anxiety. Available 24 hours on weekends, and Monday to Thursday from 6pm to 2am.

Website: [breathingspace.scot](http://breathingspace.scot)

Telephone: 0800 83 85 87 (freephone)

#### The Mix

Free support service for young people under 25, about anything from mental health to money, and break-ups to drugs. Available every day by telephone, online 1-2-1 chat, email, and social media.

Website: [www.themix.org.uk](http://www.themix.org.uk)

Telephone: 0808 808 4884 (freephone)

#### Samaritans

Free, confidential helpline that provides emotional support to anyone in emotional distress, struggling to cope, or at risk of suicide. Available 24 hours, 7 days a week, 365 days a year, and contactable by telephone or email.

Website: [www.samaritans.org](http://www.samaritans.org)

Telephone: 116 123 (freephone)

Email: [jo@samaritans.org](mailto:jo@samaritans.org)

#### Winston's Wish

Charity that supports children, young people and their families after a bereavement. Offers support, information and advice. Calls are free and confidential, available Monday to Friday (exc. Bank Holidays) from 9am to 5pm.

Website: [www.winstonswish.org.uk](http://www.winstonswish.org.uk)

Telephone: 08088 020 021 (freephone)

Email: [askmailbox@winstonswish.org.uk](mailto:askmailbox@winstonswish.org.uk)

#### Cruse Bereavement Care Scotland

For any enquiries about support for bereaved people. Available Monday (10-4, 5-8), Tuesday & Wednesday (10-9), Thursday (9-9), Friday (10-4), and Saturday (9-12:30).

Website: [www.crusescotland.org.uk](http://www.crusescotland.org.uk)

Telephone: 0845 600 2227 (charges apply)

Email: [support@crusescotland.org.uk](mailto:support@crusescotland.org.uk)

## Appendix J. Study 3 Debrief & Useful Contacts Pamphlet

### Participant Debrief

#### Study: Life After Someone Important Has Died

School of Psychological Sciences and Health, University of Strathclyde

Thank you very much for taking part in this research study. We are interested in finding out more about how young people face the death of someone important, and what impact this may have on their overall life and wellbeing. We asked you about the person who died, about your ways of coping with the death, and the people in your life who support you, because these factors may affect how a person deals with a loss. We also asked about your thoughts and experiences relating to self-harm, because we want to know how this might be linked with experiences of loss.

By sharing your views and experiences with us, you are helping us to better understand the issues faced by bereaved young people, and how best to support them. Your participation is valuable and very much appreciated.

Please note that you, your parents or anyone else will not get any individual feedback on your answers. However, if you feel that the study has highlighted a problem that you would like to speak to someone about then please see the details of useful contacts included in the additional information sheet provided to you. If you would like to discuss this research study further, feel free to contact the researchers whose details are listed below.

**Thank you very much for taking part.**

**This research would not be possible without the help of young people like you.**

#### Researcher contact details:

##### **Laura del Carpio (Researcher)**

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School of Psychological  
Sciences and Health  
University of Strathclyde  
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## Useful Contacts Information Sheet

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[hopeagain.org.uk](http://hopeagain.org.uk) A safe place for young people experiencing grief to share their stories with others.

[www.papyrus-uk.org](http://www.papyrus-uk.org) National charity dedicated to the prevention of young suicide.

[www.ifucareshare.co.uk](http://www.ifucareshare.co.uk) Provides information and support for young people affected by suicide.

[supportaftersuicide.org.uk](http://supportaftersuicide.org.uk) Network of organisations that support those bereaved or affected by suicide.

[www.cool2talk.org](http://www.cool2talk.org) Confidential place for young people to freely ask questions about anything affecting them. Responses within 24 hours.

[youngminds.org.uk](http://youngminds.org.uk) Information about emotional wellbeing and mental health, including helpful resources for anyone concerned.

[www.sane.org.uk](http://www.sane.org.uk) National mental health charity providing emotional support, guidance and information to anyone affected by mental illness.

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[www.b-eat.co.uk](http://www.b-eat.co.uk) Support and information for individuals affected by eating disorders.

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Dr. Susan Rasmussen (Chief Investigator/Supervisor)  
[s.a.rasmussen@strath.ac.uk](mailto:s.a.rasmussen@strath.ac.uk)

Dr. Sally Paul (Supervisor)  
[sally.paul@strath.ac.uk](mailto:sally.paul@strath.ac.uk)



## Life After Someone Important Has Died

### USEFUL CONTACTS



If you have been affected by any of the issues raised in this study and wish to speak to someone about it, we would advise you to contact any of the following:

- **Someone you trust**, like a close friend or family member
- **A teacher or counsellor** at your school
- Your **GP surgery or NHS 24** (Telephone: 111), who can advise you about appropriate supports available to you for any mental or physical health concerns



If you would like to speak to someone else about things that may be bothering you, you could also contact one of the following helplines. You will speak to a trained professional who can provide you with information, advice, or just someone to listen:

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Website: [www.childline.org.uk](http://www.childline.org.uk)  
Telephone: 0800 1111 (freephone)

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Free, confidential phone service for anyone experiencing low mood, depression, or anxiety. Available 24 hours on weekends, and Monday to Thursday from 6pm to 2am.

Website: [breathingspace.scot](http://breathingspace.scot)  
Telephone: 0800 83 85 87 (freephone)

#### The Mix

Free support service for young people under 25, about anything from mental health to money, and break-ups to drugs. Available every day by telephone, online 1-2-1 chat, email, and social media.

Website: [www.themix.org.uk](http://www.themix.org.uk)  
Telephone: 0808 808 4994 (freephone)

#### Samaritans

Free, confidential helpline that provides emotional support to anyone in emotional distress, struggling to cope, or at risk of suicide. Available 24 hours, 7 days a week, 365 days a year, and contactable by telephone or email.

Website: [www.samaritans.org](http://www.samaritans.org)  
Telephone: 116 123 (freephone)  
Email: [jo@samaritans.org](mailto:jo@samaritans.org)

#### Child Bereavement UK

Provides free support and information by telephone or face to face for bereaved children, young people and their families. Also runs Young People's Advisory Groups. Calls are free and confidential, available Monday to Friday from 9am to 5pm.

Website: [www.childbereavementuk.org](http://www.childbereavementuk.org)  
Telephone: 0800 02 888 40 (freephone)  
Email: [support@childbereavementuk.org](mailto:support@childbereavementuk.org)

#### Cruse Bereavement Care Scotland

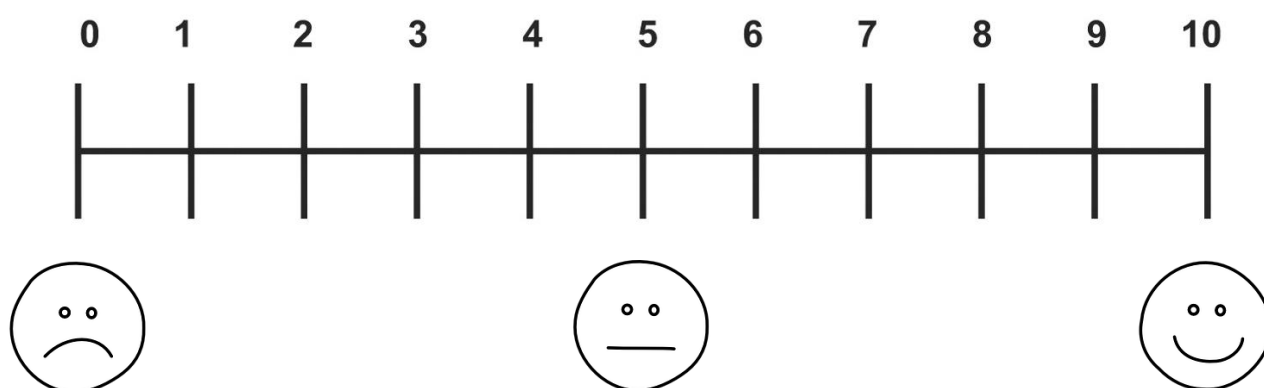
For any enquiries about support for bereaved people. Available Monday (10-4, 5-8), Tuesday & Wednesday (10-9), Thursday (9-9), Friday (10-4), and Saturday (9-12:30).

Website: [www.crusescotland.org.uk](http://www.crusescotland.org.uk)  
Telephone: 0845 600 2227 (charges apply)  
Email: [support@crusescotland.org.uk](mailto:support@crusescotland.org.uk)

## Appendix K. Study 3 Visual Analogue Scale for Mood

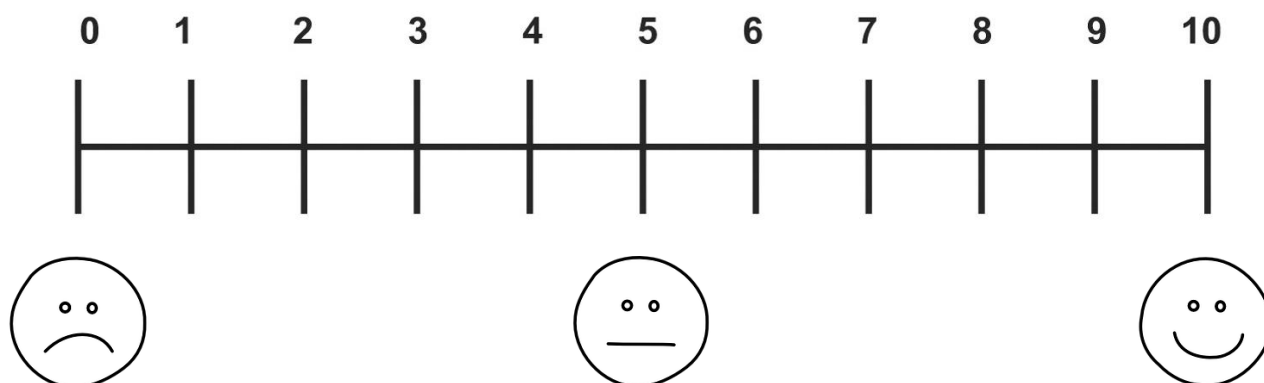
### Pre-Study VAS

How are you feeling?



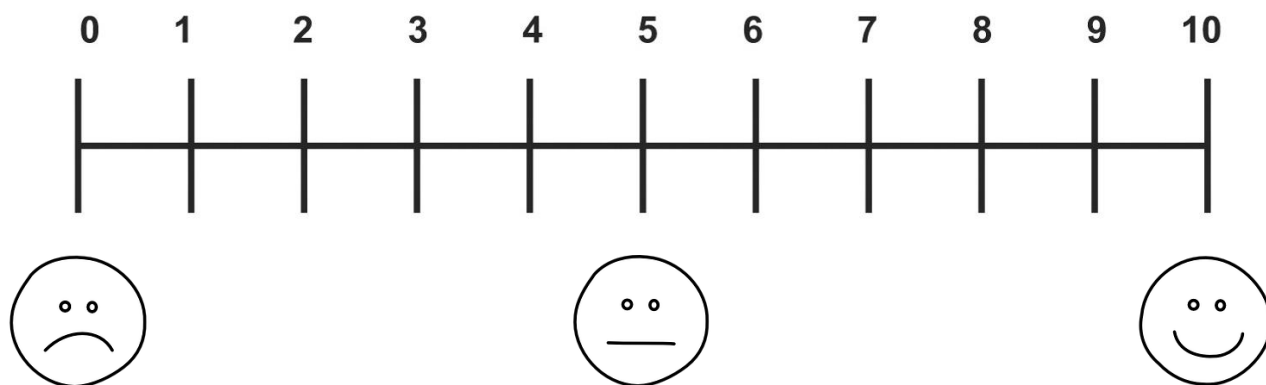
### Post-Interview VAS

How are you feeling?



## Post-CaTS VAS

How are you feeling?



## Appendix L. Reflective Journal Excerpt

15/02/2021:

Attended a Qualitative Special Interest Group discussion today with fellow Strathclyde students and staff, and had an engaging conversation around participatory research. Discussion came up about the importance of silences and how sometimes they are just moments when the participant is thinking about a question they have never been asked before – and in this way, it is important to allow them this time to reflect.

Having not long finished the transcription process, I have been reflecting a lot about the fact that I feel I did not always leave enough time for silences during my interviews. I would say this was mainly in interviews where the participant seemed more closed, perhaps did not have much to say about a question, or where a longer silence might have felt uncomfortable (nerves?) – but especially in these cases, these silences may have been particularly important to sit with.

It may be that some of the participants were considering my questions for the first time ever. It is no doubt they will have spent significant periods of time thinking about the death, but not necessarily focussing on these topics. Some participants mentioned after the interview that they now see things differently, e.g., saying they have gained an appreciation for the people they have in their lives because of the questions they were asked. Therefore, it may well be that they had never considered some of these issues before, and needed that time to assess their thoughts or make connections.

Thinking back, I remember discussing this a lot with colleagues in my previous work [supporting adults with mental health problems], about how allowing those silences is so important when supporting individuals. It could serve as a therapeutic tool, giving people the space they need to explore and express their thoughts, convey compassion or empathy, or build trust – and also demonstrates that you (both) have a certain level of comfort with each other to not be bothered by those quiet moments. In the future, I need to keep in mind not to rush interviews and allow the silences to happen (or to be experienced) in addition to the spoken words.

## Appendix M. Study 2 Gender Differences in Baseline Measures

**Table M.1.**

*Gender Differences in Categorical Variables: Experiences of SSHTBs and Bereavement at T1 (n = 185)*

	No. of respondents in analysis	Male (n)	Female (n)	Chi-square*	phi coefficient
Self-Harm Enaction	177	80	97	$\chi^2(1) = 4.69, p = .030$	.177
Self-Harm Ideation (combined self-harm and suicide thoughts)	174	82	92	$\chi^2(1) = 8.29, p = .004$	.230
Self-Harm Thoughts Only	169	79	90	$\chi^2(1) = .72, p = .395$	.079
Suicide Thoughts Only	174	82	92	$\chi^2(1) = 11.86, p = .001$	.273
Bereavement Status (ACQ)**	181	84	97	$\chi^2(1) = 1.09, p = .297$	.091
Bereavement Status (LEC)***	179	84	95	$\chi^2(1) = 1.00, p = .318$	.087

*Notes.* Due to missing data, the sample size varied by question. \*Chi-square tests reported with Yates Continuity Correction for 2x2 tables. \*\*Author-created question on experiencing death of someone important; binary response. \*\*\*Life Events Checklist questions on experiencing death of immediate family member or someone else close (combined); binary response.

**Table M.2.***Gender Differences in Continuous Variables: Questionnaire Measures at T1 (n = 185)*

	Males		Females		<i>t</i> ( <i>df</i> **)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i> *	<i>M</i>	<i>SD</i> *			
Depression	5.3	5.9	9.5	7.5	-4.19 (19410330.55)***	<.001	.62
Anxiety	4.0	5.2	9.0	6.2	-5.88 (820624.70)***	<.001	.87
Defeat	13.8	11.8	20.8	16.3	-3.34 (5257607.52)***	.001	.49
Entrapment - Total	10.3	12.2	17.0	15.7	-3.21 (919649.33)***	.001	.48
Self-Esteem	19.6	5.6	22.8	5.9	-3.74 (527364.17)	<.001	.56
Prolonged Grief	43.2	10.4	49.5	13.7	-3.09 (12868865.89)	.002	.53
SOSS - Stigma	2.3	0.8	2.0	0.7	2.43 (36612.55)	.015	.37
SOSS - Isolation/Depression	3.4	1.1	3.8	0.9	-2.52 (73299.77)	.012	.38
SOSS - Glorification/Normalisation	2.4	0.9	2.6	0.9	-0.94 (31260.16)	.349	-
Adaptive Coping	33.1	9.1	34.5	8.5	-1.09 (135474.74)	.274	-
Maladaptive Coping	20.3	5.2	23.2	5.9	-3.48 (101965.32)	.001	.53
Social Support - Family	5.8	1.4	5.6	1.4	.92 (320618.98)	.358	-
Social Support - Friends	5.3	1.4	5.2	1.7	.36 (432080.13)	.716	-
Social Support - Sig Other	5.6	1.4	5.5	1.6	.37 (369059.78)	.710	-
Total Negative Life Events	7.5	5.6	10.2	6.0	-2.77 (142)	.006	.46

*Notes:* Due to missing data, numbers varied slightly in each group. \*SDs were calculated by averaging SDs across all 68 imputations, as pooled SD values not calculated by SPSS. \*\*Degrees of freedom are quite large, as SPSS does not currently apply an adjustment when pooling results from multiply imputed data; further discussion of this issue can be found in Barnard and Rubin (1999) and Wang and Johnson (2018). \*\*\*Levene's Test for Equality of Variances was significant for Depression, Anxiety, Defeat, and Entrapment [Total and Internal] variables, indicating that homogeneity of variance was violated; results presented correspond to equal variances not assumed.

## Appendix N. Pattern of Missing Values

Figure N.1 displays the patterns of missing values, with each row corresponding to cases with the same pattern of missing or complete data. It appears that the missing data are possibly nonmonotonic (Dong & Peng, 2013). This was supported by SPSS automatically selecting the fully conditional specification imputation method (rather than monotone imputation method) to impute values.

**Figure N.1.**

*Chart of Missing Value Patterns for Baseline Data*

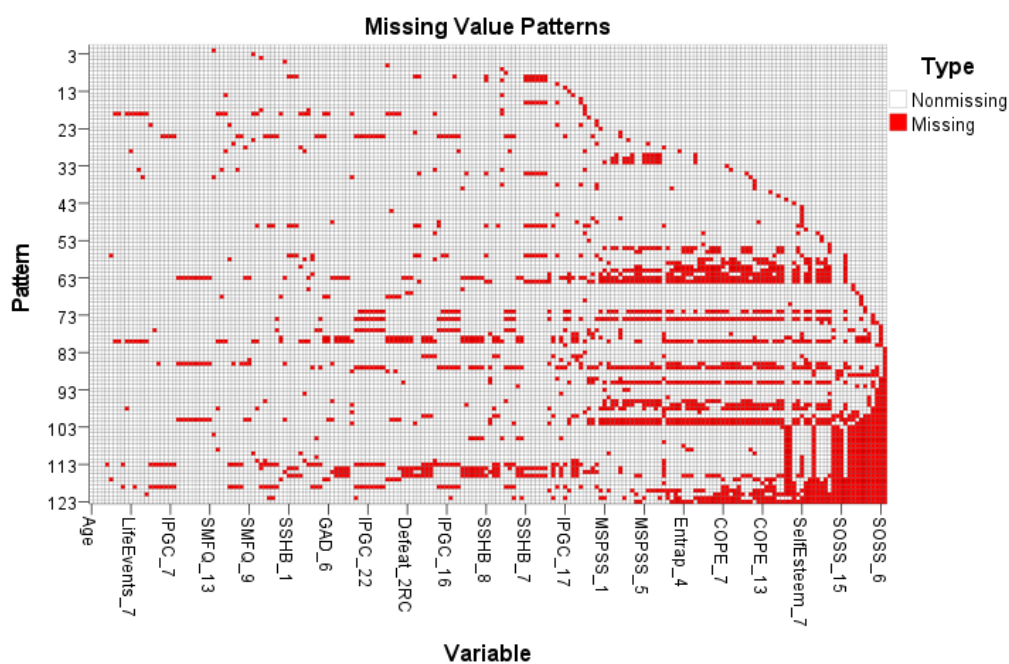
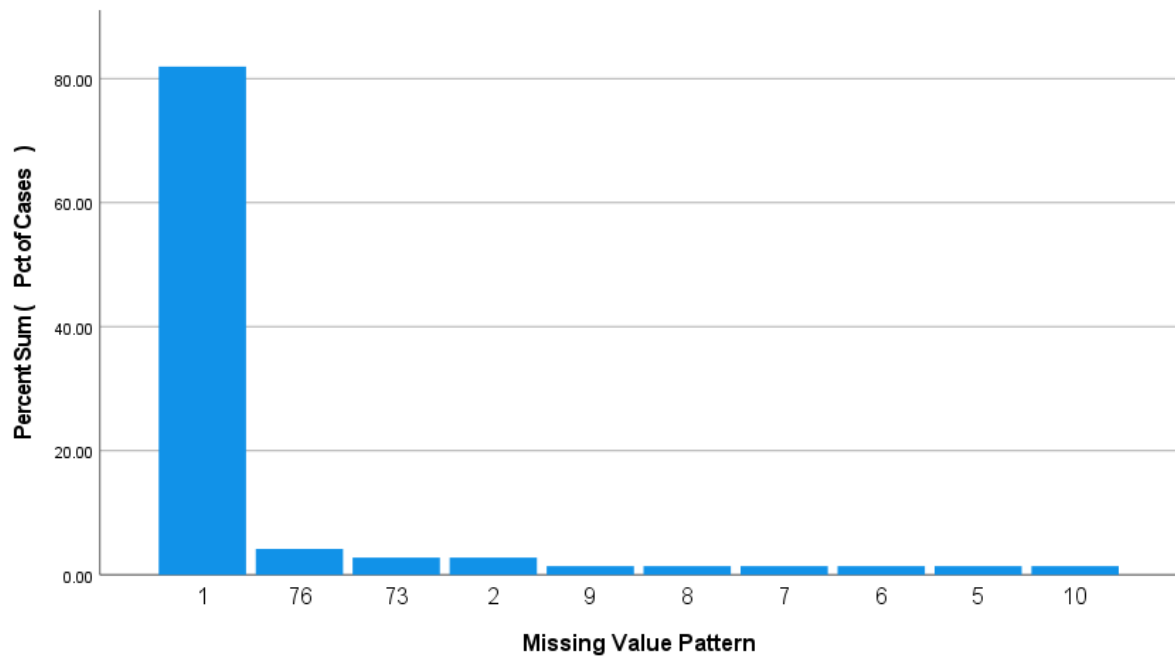


Figure N. 2 suggests that over 80% of cases in the dataset have Pattern 1, representing the pattern for cases with no missing values.

**Figure N.2.**

*Bar Chart Displaying the Percentage of Cases for Each Pattern*



The 10 most frequently occurring patterns are shown in the chart.

## Appendix O. Assumptions Checks

### Logistic Regression Assumptions (Aim 3) at Baseline

#### Preliminary Assumptions

Logistic regression is appropriate when the dependent variable (self-harm group) is measured on a nominal scale and categories are mutually exclusive and exhaustive, the independent variables are continuous or nominal, and observations are independent. It has been suggested that the overall sample in logistic regressions should be at least 100, and ideally closer to 500 participants, with at least 10 times as many cases as there are independent variables in the analysis (Long, 1997). Stoltzfus (2011) recommends that at least 10 to 20 events per independent variable are necessary to avoid an overfit model. Hair et al. (2010) further suggest that a minimum sample size per category of the DV should include 10 observations per estimated parameter (in this case, each of the three self-harm outcome groups should have 10 times the number of predictors). The current sample of  $n = 185$  used in the following analyses with between 2 and 11 predictors depending on the analysis meets most of these recommendations, but results should be interpreted with some caution in light of the limited power.

Multicollinearity exists when IVs are highly correlated at around  $r = .9$  or above (Pallant, 2010; Tabachnick & Fidell, 2007), or  $r = .7$  or above according to Knapp (2017). As can be seen from Table 3, there were various high correlations between depression, anxiety, defeat, and total entrapment variables (range of  $r$  between these variables was  $.65 - .81$ ,  $p < .001$ ). Correlations above  $.7$  also included those between: depression and self-esteem ( $r = .72$ ,  $p < .001$ ), and defeat and self-esteem ( $r = .82$ ,  $p < .001$ ). Unsurprisingly, the total entrapment score and its subscales correlated very highly with each other (range of  $r = .95 - .97$ ,  $p < .001$ ), and total social support also correlated very highly with the three social support subscales (range of  $r = .82 - .88$ ,  $p < .001$ ). To further investigate these concerns, a linear regression was carried out on the data using the same criterion and predictor variables to consult collinearity statistics. Unsurprisingly, the Total Entrapment and Total Social Support variables were excluded from the analysis, given their high correlations with their respective subscales. For the remaining variables entered in the model, tolerance values ranged from  $.14$  to  $.87$ , with none falling below the  $.10$  to  $.20$  cut-off suggested to reflect possible multicollinearity (Field, 2018; Menard, 1995). Variance Inflation Factor (VIF) values were also consulted, with values over 10 considered problematic (Myers, 1990); here all VIFs ranged from 1.15 to 7.11, and the average VIF (2.61) was not considerably greater than 1 (Bowerman & O'Connell, 1990). Eigenvalues near 0 can also indicate problems; there was some concern with the three Life Events Checklist items (suicide death, family DSH, friend DSH), eigenvalue range =  $.004$  to  $.014$ . However, all values were relatively close to each other, with none much larger than others. Condition Indices also exceeded the recommended cut-off of 30 to indicate serious problems for the three LEC variables (range = 34.25 to 67.93). Nonetheless, variance proportions indicated that no Condition Index accounted for a large proportion of variance in more than one variable, which would otherwise indicate concern. Taken together, there is concern about multicollinearity regarding the total Entrapment and Social Support variables with their respective subscales, as they were excluded from the analysis. It was therefore decided to only include Total Entrapment (to allow for comparisons with the extant literature) and each social support subscale in the final model.

To check the assumption of linearity of the logit, which assumes that each continuous predictor has a linear relationship with the logit of the outcome variable, the continuous variables were log transformed to check that each one is linearly related to the log of the outcome variable. This was done by running logistic regressions and including the interaction terms of each continuous variable and its log transformation in the model to predict the outcome of self-harm group at T2. Because the outcome category was not binary (as there were 3 levels of self-harm group), dummy variables were created and 3 separate logistic regressions were run to verify this assumption. Across the three analyses, none of the interaction terms were significant, thus the assumption of linearity of the logit has been met.

## Logistic Regression Assumptions (Aim 3) at Follow-Up

### Preliminary Assumptions

Logistic regression is appropriate when the dependent variable (self-harm group) is measured on a nominal scale and categories are mutually exclusive and exhaustive, the independent variables are continuous or nominal, and observations are independent. It has been suggested that the overall sample in logistic regressions should be at least 100, and ideally closer to 500 participants, with at least 10 times as many cases as there are independent variables in the analysis (Long, 1997). Stoltzfus (2011) recommends that at least 10 to 20 events per independent variable are necessary to avoid an overfit model. Hair et al. (2010) further suggest that a minimum sample size per category of the DV should include 10 observations per estimated parameter (in this case, each of the three self-harm outcome groups should have 10 times the number of predictors). The current sample of  $n = 115$  used in the following analyses with between 2 and 12 predictors depending on the analysis meets most of these recommendations, but results should be interpreted with some caution in light of the limited power.

Multicollinearity exists when IVs are highly correlated at around  $r = .9$  or above (Pallant, 2010; Tabachnick & Fidell, 2007), or  $r = .7$  or above according to Knapp (2017). As can be seen from Table 3, there were various high correlations between depression, anxiety, defeat, total entrapment, and self-esteem variables (range of  $r$  for these variables was  $.71 - .87$ ,  $p < .001$ ). Correlations above  $.7$  also included those between: depression and maladaptive coping ( $r = .70$ ,  $p < .001$ ), defeat and self-esteem ( $r = .81$ ,  $p < .001$ ), and total entrapment and maladaptive coping ( $r = .73$ ,  $p < .001$ ). Unsurprisingly, the total entrapment score and its subscales correlated very highly with each other (range of  $r = .95 - .97$ ,  $p < .001$ ), and total social support also correlated very highly with the three social support subscales (range of  $r = .84 - .88$ ,  $p < .001$ ). To further investigate these concerns, a linear regression was carried out on the data using the same criterion and predictor variables to consult collinearity statistics. Unsurprisingly, the Total Entrapment and Total Social Support variables were excluded from the analysis, given their high correlations with their respective subscales. For the remaining variables entered in the model, tolerance values ranged from  $.12$  to  $.73$ , with none falling below the  $.10$  to  $.20$  cut-off suggested to reflect possible multicollinearity (Field, 2018; Menard, 1995). Variance Inflation Factor (VIF) values were also consulted, with values over 10 considered problematic (Myers, 1990); here all VIFs ranged from 1.36 to 8.09, and the average VIF (3.00) was not considerably greater than 1 (Bowerman & O'Connell, 1990). Eigenvalues near 0 can also indicate problems; there was some concern with the three Life Events Checklist items (suicide death, family DSH, friend DSH) reasonably close to 0 (eigenvalue range =  $.003$  to  $.011$ ). However, all values were relatively close to each other, with none much larger than others. Condition Indices also exceeded the recommended cut-off of 30 to indicate serious problems for the three LEC variables (range = 38.46 to 73.51). Nonetheless, variance proportions indicated that no Condition Index accounted for a large proportion of variance in more than one variable, which would otherwise indicate concern. Taken together, there is concern about multicollinearity regarding the total Entrapment and Social Support variables with their respective subscales, as they were excluded from the analysis. It was therefore decided to only include Total Entrapment (to allow for comparisons with the extant literature) and each social support subscale in the final model.

To check the assumption of linearity of the logit, which assumes that each continuous predictor has a linear relationship with the logit of the outcome variable, the continuous variables were log transformed to check that each one is linearly related to the log of the outcome variable. This was done by running logistic regressions and including the interaction terms of each continuous variable and its log transformation in the model to predict the outcome of self-harm group at T2. Because the outcome category was not binary (as there were 3 levels of self-harm group), dummy variables were created and 3 separate logistic regressions were run to verify this assumption. Across the three analyses, none of the interaction terms were significant, thus the assumption of linearity of the logit has been met.

## **Multiple Regression Assumptions (Aim 4) at Baseline**

### **Preliminary Assumptions: Predicting T1 Defeat**

#### Sample size

It has been suggested that for multiple regressions, the sample size should contain at least 15 times as many cases as there are independent variables (Stevens, 2002). Alternatively, Green (1991) recommends that when testing overall models, the sample size should be at least  $N \geq 50 + 8m$ , where  $m$  is the number of independent variables, and when testing individual predictors, a sample size of  $N \geq 104 + m$  should be used. Harris (1985) proposes that at least 50 participants more than the number of predictor variables should be included ( $N \geq 50 + m$ ). At least 10 participants for every independent variable, and ideally closer to 30 participants per variable is recommended by Wilson VanVoorhis and Morgan (2007). Based on these recommendations, the sample size of 179 participants (6 individuals were excluded due to missing data) included in this analysis with 5 independent variables is suitable for multiple regression.

#### Multicollinearity

Multicollinearity exists when IVs are highly correlated at around  $r = .9$  or above (Pallant, 2010; Tabachnick & Fidell, 2007), or  $r = .7$  or above according to Knapp (2017). The correlation between anxiety and depression ( $r = .74, p < .001$ ) raised some concern. To further investigate this, collinearity diagnostics were consulted. Tolerance values all ranged from .41 to .97, with none falling below the .1 to 0.2 cut-off suggested to reflect multicollinearity (Field, 2018; Menard, 1995). Variance Inflation Factor (VIF) values were also consulted, with values over 10 considered problematic (Myers, 1990); here all VIFs ranged from 1.03 to 2.46, and the average VIF (1.65) was not considerably greater than 1 (Bowerman & O'Connell, 1990). Eigenvalues near 0 can also indicate problems; there was some concern with anxiety and bereavement variables reasonably close to 0 (.06 and .01, respectively). Condition Index values did not exceed the recommended cut-off of 30 to indicate serious problems, though the bereavement term had a Condition Index of 28.97. Variance proportions indicated that one dimension (depression) accounted for a large amount of variance in anxiety and depression (with an associated Condition Index of 6.49). Taken together, these findings suggest no major concerns about multicollinearity. Considering that the variables in question (anxiety and depression) are being entered into the model as control variables only, and any potential multicollinearity is not associated with the variable of interest and will thus not affect its coefficient, all variables were retained.

#### Normality of Residuals

It is assumed that residuals are normally distributed about the scores of the dependent variable, with a mean of 0. From inspecting the Normal Probability Plots of the Regression Standardised Residual, no major deviations from the line are apparent. The histograms reflect a reasonably normal distribution, and the scatterplots of standardised residuals show points scattered evenly around 0, thereby meeting this assumption.

#### Outliers

From inspecting the scatterplots and residual statistics, there were no cases with standardised residuals below -3.3, though the maximum standardised residual was 3.31. However, no Mahalanobis distances exceeded the critical value of 20.52 (the maximum value

was 16.15) to indicate the presence of outliers (Tabachnick & Fidell, 2007). Furthermore, the greatest Cook's Distance was .19, which falls below the cut-off of 1 which would indicate problems, as recommended by (Tabachnick & Fidell, 2007).

#### Linearity of Residuals

Residuals should have a linear relationship with the predicted dependent variable scores. From inspecting the scatterplots, there does not appear to be a non-linear pattern which would indicate problems.

#### Homoscedasticity of Residuals

The assumption of homoscedasticity assumes that the variance of the residual terms is constant at each level of the independent variable. From the scatterplots, there is no evident pattern of heteroscedasticity, with residuals evenly spread around the regression line and not resembling a funnel shape, suggesting this assumption has been met.

#### Independence of Residuals

It is assumed that for any two observations, the residual terms should be uncorrelated, with a Durbin-Watson test value between 1 and 3 (Field, 2018). Durbin-Watson = 1.88, indicating no concerns about independent errors.

## **Preliminary Assumptions: Predicting T1 Entrapment**

### Sample size

A total of 179 participants (6 individuals were excluded due to missing data) were included in this analysis with 6 independent variables; this was deemed an appropriate sample size given the sample size recommendations for multiple regression noted above.

### Multicollinearity

The correlations between depression and anxiety ( $r = .74, p < .001$ ), depression and defeat ( $r = .80, p < .001$ ), and anxiety and defeat ( $r = .74, p < .001$ ) were moderately high. Tolerance values for all variables ranged from .29 to .97, and VIFs ranged from 1.03 to 3.49, both below the cut-offs to indicate multicollinearity. The average VIF (2.14) was not considerably greater than 1. The eigenvalues of the bereavement (.01), defeat (.06), and anxiety (.09) variables were reasonably close to zero, and the bereavement term had a Condition Index value of 32.32, which may indicate potential problems. Variance proportions indicated that one dimension (anxiety) accounted for a large amount of variance in depression and defeat (with an associated Condition Index of 8.22). Overall, multicollinearity does not appear to be a major problem, and this is particularly the case for the main variable of interest (bereavement status), so all variables were retained for analysis.

### Normality of Residuals

From inspecting the Normal Probability Plots, the residuals fall reasonably close to the line, and the histograms also reflect a normal distribution. The scatterplots of standardised residuals show points scattered evenly around 0, suggesting this assumption has been met.

### Outliers

There were no cases with standardised residuals below -3.3 or above 3.3 evident in the scatterplots and residual statistics, and Cook's Distances did not exceed .09, falling below the recommended cut-off of 1. There was one participant with a Mahalanobis distance exceeding the critical value of 22.46 (average Mahalanobis distance = 5.97 across the imputed datasets), indicating a possible outlier. This participant did not exhibit a high leverage value (all values were below 0.2). The analysis was re-run after removing this case to check its influence on the analysis, and was found to have no significant impact on the results.

### Linearity of Residuals

From the scatterplots, there does not appear to be a curvilinear relationship between the variables to indicate problems with linearity.

### Homoscedasticity of Residuals

Residuals appear evenly spread around the regression line with no evidence of funnelling, suggesting the assumption of homoscedasticity has been met.

### Independence of Residuals

The value of the Durbin-Watson statistic was 2.09, indicating that residuals are independent.

## **Multiple Regression Assumptions (Aim 4) at Follow-Up**

### **Preliminary Assumptions: Predicting T2 Defeat**

#### Sample size

A total of 111 participants (4 individuals were excluded due to missing data) were included in this analysis with 5 independent variables; this was deemed an appropriate sample size given the sample size recommendations for multiple regression noted above.

#### Multicollinearity

The correlation between anxiety and depression ( $r = .71, p < .001$ ) was moderately high. Tolerance values for all variables ranged from .43 to .95, and VIFs ranged from 1.06 to 2.33, both below the cut-offs to indicate multicollinearity. The average VIF (1.61) was not considerably greater than 1. The eigenvalues of the anxiety (.05) and bereavement (.01) variables were reasonably close to zero. Condition Index values did not exceed the recommended cut-off of 30 to indicate serious problems, though the bereavement term had a Condition Index of 29.08. Variance proportions indicated that one dimension (depression) accounted for a large amount of variance in anxiety and depression (with an associated Condition Index of 6.31). Taken together, these findings suggest no major concerns about multicollinearity. Considering that the variables in question (anxiety and depression) are being entered into the model as control variables only, and any potential multicollinearity is not associated with the variable of interest and will thus not affect its coefficient, all variables were retained.

#### Normality of Residuals

It is assumed that residuals are normally distributed about the scores of the dependent variable, with a mean of 0. From inspecting the Normal Probability Plots of the Regression Standardised Residual, no major deviations from the line are apparent. The histograms reflect a reasonably normal distribution, and the scatterplots of standardised residuals show points scattered evenly around 0, thereby meeting this assumption.

#### Outliers

From inspecting the scatterplots and residual statistics, there were no cases with standardised residuals below -3.3 or above 3.3, and no Mahalanobis distances exceeded the critical value of 20.52 (the maximum value was 15.45) to indicate the presence of outliers (Tabachnick & Fidell, 2007). Furthermore, the greatest Cook's Distance was .08, which falls below the cut-off of 1 which would indicate problems, as recommended by (Tabachnick & Fidell, 2007).

#### Linearity of Residuals

Residuals should have a linear relationship with the predicted dependent variable scores. From inspecting the scatterplots, there does not appear to be a non-linear pattern which would indicate problems.

#### Homoscedasticity of Residuals

The assumption of homoscedasticity assumes that the variance of the residual terms is constant at each level of the independent variable. From the scatterplots, there is no evident

pattern of heteroscedasticity, with residuals evenly spread around the regression line and not resembling a funnel shape, suggesting this assumption has been met.

#### Independence of Residuals

It is assumed that for any two observations, the residual terms should be uncorrelated, with a Durbin-Watson test value between 1 and 3 (Field, 2018). Durbin-Watson = 1.88, indicating no concerns about independent errors.

## **Preliminary Assumptions: Predicting T2 Entrapment**

### Sample size

A total of 111 participants (4 individuals were excluded due to missing data) were included in this analysis with 6 independent variables; this was deemed an appropriate sample size given the sample size recommendations for multiple regression noted above.

### Multicollinearity

The correlations between depression and anxiety ( $r = .71, p < .001$ ), and depression and defeat ( $r = .78, p < .001$ ) were moderately high. Tolerance values for all variables ranged from .31 to .95, and VIFs ranged from 1.06 to 3.19, both below the cut-offs to indicate multicollinearity. The average VIF (2.03) was not considerably greater than 1. The eigenvalues of the bereavement (.01), defeat (.05), and anxiety (.09) variables were reasonably close to zero, and the bereavement term had a Condition Index value of 32.32, which may indicate potential problems. Variance proportions indicated that one dimension (anxiety) accounted for a large amount of variance in depression and defeat (with an associated Condition Index of 8.10). Overall, multicollinearity does not appear to be a major problem, and this is particularly the case for the main variable of interest (bereavement status), so all variables were retained for analysis.

### Normality of Residuals

From inspecting the Normal Probability Plots, the residuals fall reasonably close to the line, and the histograms also reflect a normal distribution. The scatterplots of standardised residuals show points scattered evenly around 0, suggesting this assumption has been met.

### Outliers

There were no cases with standardised residuals below -3.3 or above 3.3 evident in the scatterplots and residual statistics, and Cook's Distances did not exceed .17, falling below the recommended cut-off of 1. There was one participant with a Mahalanobis distance exceeding the critical value of 22.46 (average Mahalanobis distance = 5.95 across the imputed datasets), indicating a possible outlier. This participant exhibited a slightly high leverage value (0.22). The analysis was re-run after removing this case to check its influence on the analysis, and was found to have no significant impact on the results.

### Linearity of Residuals

From the scatterplots, there does not appear to be a curvilinear relationship between the variables to indicate problems with linearity.

### Homoscedasticity of Residuals

Residuals appear evenly spread around the regression line with no evidence of funnelling, suggesting the assumption of homoscedasticity has been met.

### Independence of Residuals

The value of the Durbin-Watson statistic was 2.10, indicating that residuals are independent.

## Appendix P. Motives for Self-Harm at T2

**Table P.1.**

*Motives for Self-Harm Reported by Participants at T2 (n = 33)*

	n	%
I wanted to get relief from a terrible state of mind	28	84.85
I wanted to punish myself	24	72.73
I wanted to die	18	54.55
I wanted to show how desperate I was feeling	6	18.18
I wanted to find out whether someone really loved me	5	15.15
I wanted to frighten someone	1	3.03
I wanted to get my own back on someone	1	3.03
I wanted to get some attention	1	3.03

## Appendix Q. Study 3 Demographic Questionnaire

### Demographic Information

What is your age (in years)? \_\_\_\_\_

What sex were you assigned at birth on your original birth certificate?

- Male
- Female
- Prefer not to say

What is your current gender identity?

- Male
- Female
- Transgender male/Trans man/Female-to-Male (FTM)
- Transgender female/Trans woman/Male-to-Female (MTF)
- Genderqueer, neither exclusively male nor female
- Additional Gender Category, or Other, please specify: \_\_\_\_\_
- Don't know
- Prefer not to say

How would you describe your ethnic origin?

- White
- Mixed/Multiple Ethnicities
- Asian/Asian Scottish or Asian British
- Black/African/Caribbean/Black Scottish or Black British
- Any Other ethnic group (please describe): \_\_\_\_\_
- Unknown
- Prefer not to say

What are the first three digits of your postcode? \_\_\_\_\_

*This will not allow us to identify where you live, but will allow us to compare how people living in different areas of the country think and feel.*

## Appendix R. Example Coding and Theme Generation

As I said I've had really bad mental health problems, erm, it was that January after the [MONTH] he died where I started self-harming. I had like, I would isolate myself, like I said, for weeks. I... actually would write down everything I hated about myself. Like, it wasn't just his death, but it was everything happening at that one time, I genuinely felt that my life was just spiralling around me and I had no control. And I would not let myself eat, like it was not a good time. And I've had periods of that since. Like erm, I've been through talking therapy, cognitive behavioural therapy, and everything like, I have periods where I'm okay and I'm good, and then I fall. And every time I fall it gets deeper and deeper. And with more unhealthy mechan- coping mechanisms. And so I didn't cope well. I would pull two all nighters in a row and then have a twelve hour sleep, and my mum couldn't wake me up for school, I wouldn't get out of bed, my attendance for second and third year were shocking...

Code Key:

**Light Green:** Mental health difficulties; **Orange:** Engagement in SSHTBs; **Dark Green:** Isolating self/withdrawing & Coping alone; **Light Blue:** Inability/difficulty to cope  
**Dark Blue:** Lack of control; **Red:** Neglecting or declining physical health (overlapping with mental health); **Brown:** Ambiguous support from professionals; **Pink:** Academic problems

**Table R.1.***Coding and Theme Generation Process*

<b>Initial Codes</b>	<b>Initial Theme Generation</b>	<b>Refined Themes &amp; Subthemes</b>
Mental health difficulties	Psychological health/Adjustment	1. Reactions to death: Emotional, psychological and physical responses
Engagement in SSHTBs	Self-harm as a coping skill	1. Reactions to death: Coping skills
Isolating self/withdrawing & Coping alone	Coping skills	1. Reactions to death: Coping skills
Inability/difficulty to cope	Coping skills	1. Reactions to death: Coping skills
Lack of control	Control	1. Reactions to death: Coping skills
Neglecting or declining physical health (overlapping with mental health)	Adjustment/Miscellaneous	1. Reactions to death: Coping skills
Ambiguous support from professionals	Support from professionals	2. Systems of support: External services and supports
Academic problems	Adjustment and grief experience	1. Reactions to death: Emotional, psychological and physical responses