The Prosocial Child and the Classroom: A Multidimensional Study

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Abstract

The study sought to use dominant approaches in social psychology to define and to account for the role that prosocial behaviour has on teacher perceptions of children. Existing theories and literature have not emphasised the subjectivity of prosociality in three aspects which this study sought to address. First, prosociality is an interaction rather than an objective behaviour. Second, prosociality is measured largely through third party ratings in childhood and is accurately perceived prosociality rather than objective prosociality. Thirdly, this perceived prosociality in school children was found to be associated with objective outcomes in later life. This study sought to examine this association and consider how potentially predictive power of prosocial ratings could be useful, for schools. This study also sought to classify influencing factors on prosocial development by dispositional and situational factors. Using mixed methods, the study used 194 ratings of the Goodman's Strengths and Difficulties Prosocial Questionnaire provided by class teachers in North Aberdeenshire to examine teacher perception in seven studies. The study took a mixed method approach and applied critical realism theory in order to balance social constructionist with positivist approaches. Results from quantitative study found gender and deprivation effects on teacher ratings and associated overall ratings as being most strongly correlated with empathic concern. Prosocial perceptions were also found to influence teacher decision making regarding classroom seating. Qualitative data was gathered through semi-structured interviews finding prosociality is perceived by teachers as related to individual disposition, teaching methods to address weakness in the area are based on social rather than cognitive weaknesses and benefits of prosocial children are constructed as level of ease in classroom management.

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Introduction

The starting point of this study was to consider whether the research base in prosocial behaviour could have relevance for schools. In order to consider these implications, the term prosocial was deconstructed for meaning within the wide literature base. This base highlighted that prosociality is an interaction - one cannot be prosocial without a recipient – which supported the notion that by understanding prosocial interactions, valuable psychological insights relevant to the school context could be identified.

Prosocial interaction signals internal mechanisms about how the individual connects and reacts with others. For the teacher, the prosocial signal is viewed from a unique position; teachers perceive their interactions with authority and peers during parents' absence. Prosocial levels matter because they are associated with positive outcomes in later life and are therefore relevant to schools, in their role of meeting the needs of children and preparing them for life ahead.

Social psychology has had, over decades, a focus on interpersonal relationships (for a history see Reis, 2012) within which, the subject of prosocial behaviour has developed. Prosocial behaviour is broadly considered as a set of behaviours: helping, caring and sharing. Studies from a broad range of disciplines, (for instance biology, sociology, developmental psychology, education, anthropology, psychiatry) have also made contributions to the study of prosociality. A range of studies using different approaches, timescales and sizes have demonstrated an association with prosocial behaviour in childhood and positive outcomes during adolescence and adulthood. From a broad range of examples, more positive biomarkers in health including

morbidity rates (for instance, King, McDougall, Dewit, et al., 2005), satisfaction in marriage and relationships, (for instance, Padilla-Walker & Carlo, 2012; Caprara, Barbaranelli, Pastorelli et al., (2000); Barbaranelli, Bandura, Caprara, et al., 2003), increased qualifications in education (for instance Collie and Martin, 2018 or Cordier, 2017), higher reported self-regulation and impulsive control (Obsuth, Murray, Knoll et al., 2015), and in markers of social inclusion (Caputi, Lecce, Pagnin & Banerjee, 2012; Caprara. Vittorio & Steca 2005; Musick, Herzog & House, 1999; Piliavin,1980).

This abundance of research of prosociality has direct implications for those interested in increasing life chances including teachers and educational psychologists. The latter have a specific role to consider the contexts of children and young people , and also to promote understanding within school staff of psychological factors that impact on children's experience and their cognitive development.

This study took a multi-dimensional approach to explore the topic of prosociality in children and implications for schools. 'Prosocial' is a broad term in its definition and a subsequent literature review, (as detailed in Chapter 1) confirmed that clarity was required. Prosociality was found to entail component parts including prosocial motivation, prosocial behaviour and prosocial benefit (for instance, Eisenberg, Fabes, Carlo, et al. 1992; Hastings, Zahn, Waxler et al., 2000). Further exploration of prosociality within the literature review was carried out to identify factors influencing prosocial development.

A Scoping Review (see Campbell, Tricco, Munn et al, 2023) was undertaken to inform the current research. The review included studies in a five-year period (2019-2024),

and, on this basis, a working definition of prosociality was clarified, along with the underlying assumptions on which the definition was formed (as detailed in Chapter 2). The scoping review explored the theoretical underpinnings regarding the roots of prosocial development. Further, consideration was given to the data and measurement tools used within the school context and found to be based predominantly teacher ratings (for instance, Caprara & Pastorelli, Hamre & Pianta, 2001; Verschueren & Koomen, 2012; Longobardi, Spataro & Calabrò 2020; Cuyvers, 2020).

Chapter 3 provides a further literature review to identify factors influencing prosociality within the school context and also factors influencing teacher perceptions of children. Further, to reflect the body of research linking prosociality with empathy or empathic concern, consideration was given within this chapter to theories of empathy (for instance, Eisenberg 1992; Deschamps, Been, & Matthys, 2014).

It cannot be over-stated that this study does not assume that a teacher perception of prosociality as representative of an objective measure. Notwithstanding their subjectivity, measures of childhood prosociality (as measured through teacher ratings) are associated with increased likelihood of positive outcomes for later life. In short, what teachers see in children appears to offer a particular predictor of more positive broad level outcomes and further consideration of the complexity of these links is given. To consider these factors, the study sought to consider whether teacher perceptions influenced decision making in classrooms, and specifically decision-making that also impacts on interpersonal relationships and related social status in classroom seating positions. These issues are explored in Chapter 3.

Chapter 4 summarises the methods applied in seven studies. This study took a mixed method approach (Kosmel, 2020) to gather both quantitative and qualitative data. This approach allowed a social constructionist understanding alongside positivist approaches to support and frame the evidence. It also provided opportunities for cross-validation between studies. The approach was based on a critical realism approach (Bhaskar, 2020) which allows a combination of approaches suited to the framework of educational psychology. This approach and the framework are also discussed in Chapter 4: Section 1.

Building on this foundation, studies were undertaken to address the following specific questions:

1) Are there associations between both gender and socio-economic factors and teachers' ratings of prosocial behaviour?
2) On which behaviours in children do teachers base ratings of prosociality?
3) What impact does teacher perception of prosociality have on classroom dynamics through teacher decision-making in seating?
4) What do class teachers perceive to be the basis or causes of low prosocial behaviour in children and what attributes do teachers make about prosocial abilities?
5) What factors do teachers consider when teaching prosocial skills?
6) How do class teachers report their perceptions of prosociality into classroom decision-making in respect of seating?
7) What are teacher perceptions of the benefits of prosociality? What situational and demographic factors influence teacher perceptions of prosociality?

Prosocial behaviour as a term has been empirically studied since the 1960s but there appears to have been a significant increase since 2000, based on library databases (for instance, a search in the University of Strathclyde's academic libraries displays 24,809 peer-reviewed studies in the topic of prosocial behaviour since 2000 and 1900 peer-reviewed studies before 2000). The reasons for this increase are suggested by leading researcher, Nancy Eisenberg (2016) as being related to interest from social policy makers following general public perceptions of increases in anti-social behaviour. Perceived increases in harmful risk-taking behaviour have led researchers to consider the influencing factors. For instance, national statistics from Scotland show increases in Class A drug related deaths. The urge to reduce the harm by policy makers, as Eisenberg points out has led research interest. At the same time, a shift in psychological research, has taken place since the 1970s following concerns around experiments such as the Stanford experiment (Zimbardo, 1971). Public and professional concerns during that time period culminated in a National Commission in the USA to consider how best to protect participants from deceptive designs (Vietch, 1978) and the publication of the Belmont report in 1979 (see Panicker & Stanley, 2021 for an overview). This report required three principles of research including risk-benefit analysis, fairness in sample selection and participant consent. This change contributed to the ethics approach that psychologists are required to implement today, and relatedly, led to more solution-oriented approaches in research. The emergence of Positive Psychology (for instance, Seligman & Cskicszentmihalyi, 2000) with its focus on 'what is working well', allows methodologies that to a large extent, mitigate ethical challenges from 'what is going wrong' designs. Studies of prosocial behaviours (rather than antisocial behaviours) echo this ethical shift.

An important note which will be expanded upon within the literature review (Chapter 3) is that the equally positive term 'altruism' and prosociality can often be used interchangeably (see Tintori, Ciancimino, Palomba et al., 2021). Both are positive actions that offer a benefit to another. This study, however, is focused on prosocial behaviours as distinctive from altruistic behaviour. The distinction is around the 'cost' of the action. (based on Pfattheicher, Nielsen & Thielmann, 2022). Altruism is a high-cost action whereas prosociality can be low cost, possibly as a function of keeping the group moving smoothly. Altruism can involve placing oneself at a disadvantage or risk. For the purposes of this study, the focus is on smaller low-cost actions and gestures which teachers interpret as prosocial, such as a child readily sharing resources in class or showing appropriate concern if another child is hurt.

Anecdotally, during my experience as an applied psychologist since 2000 and based on discussions with colleagues, prosociality in Scottish schools, and within Educational Psychology, appears to have a relatively low prominence in terms of term recognition. I could find one Scottish study pertaining to the topic (Warden, Christie & Kerr, 1996). This study sought to clarify the construct, examine its relevance and evaluate its potential utility in enhancing relationships in Scottish schools.

Scotland's education system has changed considerably over the last three decades following legislative changes such as the Standards in Scotland's School etc Act (2000), the introduction of Curriculum for Excellence in 2004, and a multi-agency framework, (Getting It Right For Every Child) (GIRFEC) in 2006. The latter also provided more breadth in guidance for those working with children when measuring well-being in childhood, with indicators such as emotional well-being, physical well-being and social inclusion. Throughout this period, inclusion in mainstream schools and the presumption of mainstream

education for all pupils was, and remains, a key principle of education now embedded in practice. Against this backdrop, the identification of children with additional support needs has also increased. To illustrate this increase, in 2000, when I entered the profession, schools at that time recorded around 13% of the school population as requiring some support for learning. Around 5% would have required input from Psychological Services due to barriers in learning. Around 2% would be expected to have a long-term need requiring statutory recognition of needs based on the Education Act (1980) (Scotland). (This was interpreted in practice as the 'Record of Needs' (RoN) which were later superseded by Co-ordinated Support Plans (CSPs) although intended for fewer children with complex needs following the implementation of the Education (Additional Support for Learning) (Scotland) Act (2004)).

This legislation defined a child with additional needs as a child who is unable, or unlikely to benefit from school education without the provision of additional support. In 2024, a Scottish Government report (Classes and pupils - Summary statistics for schools in Scotland 2024 suggested that the national average number of children in Scottish schools with additional needs was then around 40% as reported by schools. Given the changes in the understanding and requirement of support for these young people, Educational Psychology roles changed to a more consultative framework (see Currie, 2002). Within this context this study explores whether the concept of prosociality can inform educational approaches to strengthen peer relationships and support inclusion with a view to supporting these young people who require additional support.

Understanding prosociality may be helpful for schools, by providing a way of identifying increased risk factors for children which may impact on social inclusion levels in the short and long term. The teacher perception of prosociality, as we shall see, can impact heavily on the quality of the teacher/child bond. Teacher and pupil relationships are considered pivotal as factors of academic measures and overall school experience evident in government policy and planning, (such as Advisory Group on Relationships and Behaviour in Schools or Relationships and Behaviour in Schools Joint Action Plan, 2024-2027). The significance of these relationships has also been promoted in interventions within local authorities across Scotland such as emotion-based interventions for teachers (programmes such as EmotionWorks, or Zones of Regulation), to improve the outcomes and positive destinations for young people in the long term.

Within this context, this study has taken place with a view to raise awareness and understanding of the potential link between teacher perceptions of prosociality and successful outcomes, and whether these perceptions can provide a reliable predictor of present and future levels of social inclusion in school and the wider community.

Chapter 1:What Is Prosociality?

1.1 How is prosociality defined?

'Prosocial' is used broadly across research studies as a term that encompasses prosocial behaviours, prosocial intention and prosocial benefits. An initial examination of the literature on prosociality was undertaken, with a view to considering the component parts. The following is a summary of this exploration.

Tintori, Ciancimino, Palomba et al. (2021) proposed that prosociality is more than a defined set of behaviours but also indicative of layers of complex environmental, social and cognitive building blocks.

> The lack of a single definition lies in its complex and multidimensional nature …. the mechanisms of its development and functioning lie in many environmental and individual factors such as primary and secondary socialisation, embedding social norms and moral values, emotional and cognitive development but also biological characteristics. One of the broadest definitions of prosociality describes it as a set of actions that are intended to aid or benefit another person or groups of people without the actor's expectation of external rewards. (Tintori, Ciancimino, Palomba et al., 2021 p.2)

Within an educational context a definition of prosociality was researched by Taylor, Kluemper & Mossholder (2010) in a study which involved nursery staff being asked to consider what behaviours would be expected from, and what would be involved in prosociality. Using interviews and questionnaires, nursery staff provided broad descriptions

including empathy, sharing, compassion, helping others, compromise, and respect for others, to describe prosocial behaviour in young children. The breadth found in the responses reflected a similar difficulty in empirical research. Nursery staff showed little doubt as to the recognisability of prosociality in their real-world setting, but a clear and agreed definition seemed harder to encapsulate verbally and appeared to provide both behaviour and personal characteristics.

1.1.1 The Voluntary Nature of Prosociality

Eisenberg, Fabes, Carlo et al., (1992) provided a definition of prosocial behaviour as being "voluntary behaviour intended to benefit another" (see also Eisenberg, Zhou, Liew et al., 2006). This definition is frequently referenced within the prosocial research base. Tintori's study also highlighted the voluntary aspect of prosocial behaviour as providing 'voluntary benefit to another without personal gain'. Eisenberg's definition required prosocial behaviour to be voluntary which can have implications for schools and parents, when encouraging prosociality. For instance, children when they are obliged by adults to "be nice and share" or told to "say you're sorry," may then be reacting to a promotion of prosociality in the active behavioural sense rather than volunteering themselves. However, adult promotion of prosociality to the involuntary child may lead to a child developing an intrinsic motivation that increases independent (voluntary) prosocial action in children. In addition, the absence of personal gain is a difficult concept to define, as is the notion of what constitutes a reward. Rewards are not always tangible, for instance some children may become prosocial (helpful etc) but do so for intrinsic rewards where they are keen to feel positive self-regard that may accompany the role of benefactor. Prosociality is identified with "those behaviours that, without looking for external rewards" (Caprara 2002). It would seem reasonable to conclude that Caprara might include praise or other affirmations as being a reward and so exclude such

actions as being prosocial. It may, however, be reasonable to assume that external validation within childhood may not have altered a child's choice, and potentially praise was a secondary motivation. Caprara suggested that a child enjoying praise from teachers and parents may arguably be evidence of the child's ability to take perspective. This voluntary nature and the benefit to others (Eisenberg, 1992) is frequently emphasised as a fixed requirement of prosocial behaviour. However, in other definitions, the 'voluntary' basis may include behaviours that have been encouraged by adults (Demedardi, Stephan & Monnier, 2021; Conte, Grazzani, & Pepe, 2018; Ensor, Spencer & Hughes, 2011; Von Salisch, Zeman, Luepschen, & Kanevski, (2013). These studies provided a definition of prosocial behaviour as incorporating high self and social awareness, increased self-regulation emotions and a capacity for making responsible decisions in the sense of cooperation and sharing. This definition implies a view of the benefit to the whole group as being core in the decision making, and the question of extrinsic or intrinsic rewards seems less important. Cross cultural differences in prosocial behaviour will be examined in Chapter 3.

Various theories of the benefits of prosociality add a further layer of complexity with some theories suggesting different motivations for prosocial behaviours (such as resource theories, or bioecological models) which do not require an absence of rewards, and more focus on the external behaviour. Cognitive theorists such as Eisenberg suggested that children's prosocial action is based on internal decision making which requires inference about behavioural motivation. Notwithstanding these differences, prosociality as a general term is concerned with behaviours that bring about a benefit to another, and usually involve helping, caring and sharing, without rewards for the individual. Understanding the motivations of children engaging in prosocial behaviour poses a particular challenge for researchers given that children may not have a single motivation and that their motivation may be unclear.

An earlier study in schools (Hamre & Pianta, 2001), recognised that the behaviour of the child is influenced by the context and expectations of the teacher. This approach to some extent differs from the caring/helping/sharing child who is motivated to help others without gaining rewards of external validation. This study did not appear to question that this influenced prosociality was any less prosocial due to the potential absence of 'voluntary behaviours. An Italian study (Longobardi, Settanni, Lin, & Fabris, 2021) describes prosocial behaviour as actions aimed at favouring other people. Marengo, Jungerti, Iotti et al, 2018; Longobardi, Prino, Marengo, & Settanni, 2016) suggested that prosocial behaviour is supported by teacher relationships (i.e. a warm and caring relationship provides a modelling which the teacher passes on to the child) taking an attachment and relationship-based approach. In the Longobardi study, the causal link between teacher warmth and increased prosociality is made although it is debated whether warmth leads to a desire to please, or if warmth leads to a desire to extend that sense of warmth to others. Either way the studies suggested that there is a reward for the child, and there was no separation of intrinsic and external rewards.

1.1.2 Prosocial Intention

Tintori, (2021) acknowledged a challenge in measures of prosocial intent. Many definitions require positive intent for an individual to be described as acting prosocially. However, a lack of a follow up behaviour would not in itself imply that the individual does not want to benefit others and other factors may influence the resulting behaviour (for instance) shyness or setting. Prosociality, when defined as having prosocial intention, requires subjective judgement by the onlookers or researchers of prosocial behaviours. There are a range of factors to consider when measuring visible and explicit prosocial behaviour. Firstly,

prosocial behaviours are considered as both requiring a voluntary aspect and a prosocial intention to help. For example, if a child accidentally benefits another, then the act is not prosocial. As intent cannot be seen and only reported, it leaves researchers to infer intent. Some studies have involved isolating behaviours and identifying co-operating, including others in play, giving compliments, and comforting a child who is upset (for instance Honig 2004; Ramaswamy & Bergi 2009). Given that children may seek approval or do what they believe is expected, along with the need to measure intent, leads to more complex difficulties for researchers. The interpretation of prosocial motivations rather than prosocial behaviour leads to difficulties in research where identifiable behaviours could present as prosocial but are not prosocial if the correct motivation is not in place. Inner motivations are constructed and interpreted but are not in actuality measurable in observable methods.

1.1.3 Prosocial Actions

In a similar way, Roche-Olivar (2010) defined prosocial behaviour as any action that yields benefit to others:

> Those behaviours that, without looking for external rewards, help other people or groups. It also increases the probability of generating a positive reciprocity, solidarity and quality of interpersonal relationships or social consequences, safeguarding the identity, creativity and initiative of individuals or groups involved. (Roche-Oliver, 2010, Prosocial Challenges, p.5)

Demonstrating these actions have posed a challenge for on-lookers. For instance, compassion or empathy as evidenced by ‘caring’ are less clear, unlike the more observable ‘helping’. When prosocial behaviours are based on inference, or a range of behaviours are

based on inference in one aspect but as measurable in another, and given group differences, there will be challenges in validity and methodology which require careful thought.
Some of these studies, whilst trying to look at the detailed 'practice' of prosociality have moved away from the Eisenberg 'voluntary' requirement in prosocial action. The distinction between the voluntary descriptors (empathic, compassionate) and behaviours (including others in play, sharing resources etc) rely on the umbrella term of prosociality, but it could be argued that the breadth leads to inconsistency in what is being measured. Prosocial action takes place in relationships and specifically for children, it is often an interpretation and it seems reasonable to conclude that the benefits of prosociality within the research are likely related to *perceived* prosociality which further clouds an opaque definition.

Some researchers such as Volodina (2023) do not explicitly define prosocial behaviour but attempted to measure behaviours in school of child's capacity for success in peer relationships. The link between prosocial behaviour and peer relationships will be explored in Chapter 3, but it is important to note that Volodina used social success within a group as part of the definition which would be more identifiable to teachers but less so to parents. Teachers can perceive children in a group setting of peers in a 'working' environment with challenges in tasks and challenges in interactions outside of the home where children to some extents have less opportunity for group interactions. The nature of these perceptions will be revisited in Chapter 3 and Chapter 4.

Prosocial behaviours may strengthen the capacity for more successful group interaction, but the variability of children's interaction within a group can indicate individual capacities (such as spatial awareness, attention, processing speed, sensory regulation, physical dexterity, physical appearance). These individual variations lead to perceptions from peers and

teachers which may affect confidence and then motivate or detract from prosocial action and ultimately how the child is perceived.

1.1.4 Prosocial benefit

Prosociality has also been understood as "intrinsically motivated voluntary behaviour intended to benefit another or acts motivated by concern for others or by internalised values, goals, and self-rewards rather than by the expectation of concrete or social rewards or the avoidance of punishment' (Eisenberg & Mussen, 1989). The theoretical basis in resource theories find that ultimately the prosocial action helps group cohesion irrespective of motivation. However, the interpretation made by the perceiver of the act and the perception of the child's motivation and capacity to be seen as a caring and helping child, provides an insight into how the child is likely to be perceived, in the longer term. Unlike teacher perceptions of (for instance) reading capacity, there is a social element and evidence of long-term impact of positive relationships between children and teachers (Eggum-Wilkins (2020). The prosocial action in essence does not provide this insight, but the perception and interpretation may speak volumes about the relationship. When a teacher interprets actions in class, they are arguably working in a microcosm of society. Within this microcosm, the authority figure can make assessments of behaviours. The internal motivation and even the behaviour itself (for instance, caring) are not easily quantified. However, context clues and knowledge of the child, leads teachers to make an assessment. Whether the teacher is right or wrong about the prosocial intent is not what is being measured. What can be concluded is that what is measured is teacher interpretation. The long-term impact studies suggest that teachers are seeing what future others will see, are judging how future others will judge. Teacher prediction of long term outcome measures do so with a high level of accuracy (Verschueren & Koomen, 2012) . When a child falls and two children rush to help, engaging

in the same behaviour, a teacher can make different assessments. One child could be 'being kind' and looking after their friend. The other with a history of looking for distraction from work may be perceived as serving their own needs. Teachers can make this distinction and whether accurate or not, the long-term outcomes will likely match the teacher perception. It is teacher perceptions of prosociality, therefore, where this study will focus and further elaboration of the formation of teacher perceptions is provided in Chapter 3.

In a study of attachment disordered children, Cuyvers, Vervoort & Bosmans (2020) noted the difficulty of subjective judgements in prosocial measures and proposed prosocial action in three ways. Firstly, the prosocial action requires a demonstrable benefit to others: secondly internal processes including perspective taking, problem identification and motivation to help another and thirdly, the behavioural response. This behavioural response is categorised as responding to needs (helping), responding to material desires (with sharing) and responding to emotional needs (with caring). Cuyvers Vervoort & Bosmans proposed prosociality as having a benefit, internal decision making and a behavioural response.

1.2 The impact of prosociality

As highlighted, a wide range of studies across a range of disciplines including, for instance, health science, social science or psychiatry, have found that the capacity of carrying out positive acts to benefit another, will lead to increased likelihood of positive outcomes for the individual. Positive outcomes have been found in health (for instance, King, McDougall, DeWit, 2005; McNeely & Meglino, 1994) relationships, (for instance, Padilla-Walker & Carlo, 2012, Bandura 1991 or Bandura, Caprara, Barbaranelli et al.,2003), education (for instance Collie & Martin, 2018 or Romano, Babchishin & Pagani 2010), self-regulation (e.g. Obsuth, Murray, & Knoll 2015), and social inclusion (Caputi, 2012, Caprara & Steca, 2005,

Musick 1999, or Piliavin 2003). These benefits have been established in large scale and longitudinal studies (McNeely, 2016), using statistical and mathematical modelling (King), short scale observational socio-cognitive studies (Eisenberg, 2012, Mussen, 2001). Broadly, there is evidence from such studies that prosocial behaviours as perceived in childhood, are associated with benefits and the base provides access to increased understanding of prosocial motivation, individual variance and specific benefits.

1.2.1 Prosociality in Childhood

Within a school setting, prosociality has been found to be a strong predictor of positive outcomes in learning. Studies (such as Bierman, 2002) have suggested prosocial competence and school readiness correlate. The study proposed that prosocial competence marked a developmental change in children who are then cognitively ready or developed enough to process academic learning skills for reading and number. Miles and Stipek (2006) also correlated literacy aptitude in primary school children with prosocial skills in early childhood.

Wentzel (2007) linked goal orientation in children with levels of prosociality. She later linked the goal orientation with literacy levels suggesting that prosociality could indicate likelihood of increased outcomes in learning in secondary schools, in a longitudinal study of children at 9 years and 13 years. Wentzel's study again relied on teacher ratings of prosociality in childhood. Similar results have also been found in groups of 14-year-olds, followed up to 26 years (Laible, McGinley, Carlo et al, 2014). The association between teacher perceptions of prosociality and longer-term outcomes will be explored further in

Chapter 3, but it is important to note that these findings are associations and do not suggest causal factors.

For younger adults and adolescents within the school system, Zimmer-Gembeck, Geiger & Crick (2005) also found that prosocial behaviour in primary school, or in lower secondary schools, was linked to lower aggression levels in teenage years. Crick (1996) in a four year study of children aged 9-12 had previously found that lower levels of prosocial behaviour, based on teacher perceptions of primary school-aged children predicted higher levels of social rejection. Further, Bandura (2003) found that prosocial behaviour is positively linked to increased self-regulation and predictors of positive outcomes in terms of academic achievements. In addition, individual capacities for reasoning and impulse control have been negatively correlated. These cognitive capacities have been linked to prosociality (which will also be explored further in Chapter 3). Eisenberg had originally studied prosocial behaviour as 'prosocial moral reasoning' (before reverting to a more general 'prosociality') reinforcing the cognitive focus which can increase prosocial behaviours and potentially reduce long term risks for children who develop these capacities, notwithstanding societal influence.

Children with more prosocial behaviours tend to have more positive social relationships (e.g. positively associated with peer acceptance or negatively associated with peer victimisation) and in their contemporary academic success (Marengo, Jungert, Iotti et al., 2018). Also, relatedly, evidence suggests a link between a close relationship with the teacher and the increase in prosocial behaviour in a child (Longobardi 2018). Similar protective factors that are associated with prosociality has also been established across a range of different cultural contexts. For instance, in a large-scale Chinese study, (Fu, Li, Shen et al., 2023) also found

that prosocial behaviour and bullying were negatively associated suggesting that positive peer and teacher relationships mediate the risk of victimisation within a school setting. Controlling for classroom differences, within the complex real-world setting of schools is challenging but several studies have replicated findings that show the link between prosocial behaviour and academic performance. It has been found low academic performing children are likely to show more challenging behaviours and lower prosocial skills (Vannatta, Gartstein & Zeller (2009): Rickson &Watkins (2002 Welsh, Park, Widaman et al.,(2001). Crick (1996) also found that lower levels of prosocial behaviour in primary school-aged children predicted higher levels of social rejection in later school life and that emotional adjustment is a predictor of emotional well-being. Further consideration of this link will be expanded upon in Chapter 3.

A study considering this association and specifically whether the relationship with teachers led in itself to benefits was conducted by Wentzel (1993). In the study of 423 children aged 11-12 years using multiple regression, she found a reciprocal or bi-directional relationship between teacher closeness and prosocial behaviours in pupils and proposed that teachers tend to establish a closer and more positive relationship with children who demonstrate prosocial behaviour and academic commitment. Time spent by teachers with individual children and its impact on the quality of their relationships is a principle highlighted in studies such as Pianta & Hamre's 2001's evaluation of their intervention to reduce problem behaviour. In accordance with attachment theory, having teachers who are sensitive of the needs of the child are significant factors in determining the relationship quality. Spending individual time with children in such interventions, on a one-to-one basis, routinely (10/15 minutes at least twice weekly for eight weeks) can improve relationship quality and assumes that this relationship will 'bank time' for the child when managing later conflicts. The intervention

was evaluated (Zhao, Li & Zhang 2024) and found to have positive effects on reducing challenging behaviour in class. The evaluation also pointed to increased positive self-regard in children.

1.2.2 Prosociality and later life outcomes

Studies have linked social inclusion in adulthood with prosocial scores in early childhood. These longitudinal studies of adults have found a positive correlation between prosocial levels and social inclusion in adulthood. Social inclusion (measured as number of social roles in the community and social connectedness to the community) are strongly associated with physical and emotional well-being (Shepherd, Zhao, Carlo & Diener 2002; Halpern, 2009). The stable nature of prosocial tendencies has been studied by Eisenberg (1992) who found that prosocial behaviours in children (around 4 years) were found to display similar capacities until adulthood (adults at age 26 years) and specifically found links between capacity for sharing with adult capacity for sympathy.

Links between prosocial behaviours in childhood with increased likelihood of additional benefits in adulthood has been established in longitudinal studies. Bandura established an association between prosocial behaviours in childhood and increased self-regulation and lower impulsivity levels. Health benefits, such as reduced levels of depression and anxiety and positive physical health indicators, have been found in adults who engage in prosocial behaviours (Byrne, 2023). A large-scale, longitudinal study (Vogt, Kluge & Lee, 2020) found social connection and generosity as positively correlated with adult benefits in health including mortality rates.

In adolescence and adulthood prosocial behaviours have also been found to have a protective role against criminal behaviours, including drug misuse (such as Pittman, 2020). Prosocial

behaviour has also been associated with decreased antisocial and criminal behaviour in adults, (Carlo, Padilla-Walker &. Day, 2011). Furthermore, prosocial behaviour was associated with less deviant peer association and correlated to familial security and social connectedness. Situational factors (such as poverty) may play a significant role both at a family level and a community level, and this study suggested that prosocial behaviours also decreases in harsher environments.

Prosocial behaviour has also been linked inversely to harmful behaviours including aggression (Laible, Carlo, and Roesch 2004), and harmful risk-taking behaviours (Ludwig & Pittman,1999). These studies found that high levels of prosocial behaviours were associated to lower levels of antisocial behaviours in adulthood, including illegal activity and found that substance use, and prosocial skills were negatively correlated. Several sociological studies (such as Zimmer 2007) found that poverty and family security are significant factors in increasing likelihood of harmful risk-taking behaviour supporting the notion that prosocial behaviour can signal these outcomes although again there is no causation assumed.

Prosociality has also been negatively correlated with depression in adolescence (Musick & Wilson, 2003) and has been found to be consistently positively correlated with improved mental health in adults (Post, 2005). Prosocial behaviour has also been found to increase positive mood in the short term (Carlo, Okun, Knight et al, 2005) and conversely, studies have found that prosocial behaviour protects against negative feelings (Grant & Sonnentag 2010) and has been found to be negatively correlated with depression (Musick & Wilson 2003).

1.2.3 The stability of Prosociality

Eisenberg (1992) found that children who are rated as having prosocial tendencies in pre-school stages would display such tendencies in adulthood at age 26 years. She, however,

made the distinction that these prosocial behaviours in early childhood would only be a relatively stable if the behaviours were voluntary. She emphasised that this stability from pre-school to adulthood, was found only where prosocial behaviour was voluntary and not a result of coercion, suggesting that for young children, pressures from adults might lead to caring, helping or sharing behaviours but that these behaviours are not genuine expressions of prosocial intent. The question of what constitutes coercion has also been debated. Some adult encouragement to children has been found to be accepted as 'prosocial' if the encouragement transferred to later unforced behaviours (Honig, 2004; Ramaswamy & Bergin, 2009). Compliant children may be open to influence by adults, open to guidance, gentle encouragement and praise, and can then form their own internal conditioned response between the action and the reward of pleasing another.

Penner and Finkelstein (1998) suggested that prosocial tendencies were stable from early childhood to adulthood, and that 'a prosocial disposition' was consistent with an individual disposition which was measurable through an enduring capacity for sympathy, empathy and reasoning. Prosocial dispositions have been explored over decades finding evidence of long-term endurance of prosociality suggesting this disposition is fixed throughout life (for instance Gergen, Gergen & Meter, (1972); Rushton, (1980); Staub, (1974); Piliavin, Dovidio & Geutner (1981). If prosocial is dispositional, then it is important to consider the possible components of this disposition, which is examined more fully in Chapter 3.

In order to consider the roots of prosocial behaviour, researchers have attempted to consider what motivates it and in doing so, identify factors that impact on the development of prosociality in both situational and dispositional factors.

1.3 The basis of Prosociality

1.3.1 Early development

Eisenberg (1992) found that prosociality has been found to be evident in the interactions of very young children (from age 2). Over decades, various studies have found that younger children exhibit prosocial behaviours. These behaviours include, for instance, showing willingness to comfort others in distress (Liszkowski, Carpenter & Tomosello, 2008) and provide help to others (Rheingold,1982). Tomasello (2006), found that young children can mirror emotional states and in turn offer comfort. The child then seeks to regulate their own negative emotion, by reducing the other's distress. Very young children (around 2 years) can offer comfort through hugging, comforting others when upset and sharing resources (Taylor, Kluemper and Mossholder 2010).

A root of prosocial behaviour is proposed as being linked to the development of theory of mind in children (Eisenberg, 2002). Theory of mind (Premack & Woodruff, 1978) is a term that is used in psychology as a socio-cognitive skill. This skill is thought to develop at around age 2 and involves the cognitive ability to take the perspective of another in social contexts. The capacity to take on another perspective develops as part of the child's understanding of themselves as being separate from others, alongside understanding that another can have a different viewpoint from their own. The child is then able to develop and understand difference by understanding the 'separateness of others' and an acceptance of the internal world of others. This cognitive skill is named 'theory' of mind as one can only interpret the existence of another's mind and internal world. The skill allows a capacity to infer from available information by transferring the 'other' experience to one's own experience. People who struggle to develop these skills have difficulty interpreting what may seem to others to be clear information and signals, to understand how another is feeling. A

delayed or underdeveloped theory of mind is thought to impact one's ability to move from an egocentric position to develop empathy. Autistic diagnoses rely on questioning around capacity to empathise in this way. When related to prosociality, the requisite intent may be difficult to conceive when one cannot read the states of mind in others. The theory of mind capacity can be interchanged to some extent with empathy when one considers empathy as being a capacity to respond another's feelings and take on their emotional perspective. Various researchers (see Banerjee, (1999) or Tomasello (2008) found that being able to take on another different perspective allows us to be aware of how we are seen by others. This perspective taking is a cognitive development with a significant role in our capacity for prosociality.

Eisenberg (1992) also found a lack of co-operation in children who haven't the empathic skill to understand the internal feelings of another. Both prosociality and aggression have also been shown to be linked to the level of sympathy in individuals. (Eisenberg, Zhou, Liew, et al., 2006, Eisenberg, Spinrad, Knafo-Noam et al., (2015). Sympathy in these studies is defined as feeling concerned for those in need although the sympathiser may not share the emotion. A distinction in sympathy and empathy is that empathy requires a mirroring of emotion, which allows one to feel what another is feeling, and one may then attempt to then alleviate the shared discomfort. The sympathiser can use their experience or imagination to understand the feelings of another but not share the emotion at that time. Empathy as a mirrored emotion can lead to an absorption of emotions that may go beyond the manageable threshold, particularly for children. When a child is overwhelmed by emotions, because they strongly identify with the negative emotions of another, it may lead to an experience of personal distress and the need to find ways to regulate one's own distress can inhibit the capacity to support another. In this case, traumatised, dysregulated or distressed children are less able to respond to the needs of others (Paciello, Fida & Cerniglia, 2013).

Earlier studies of child development suggested that mirrored expressions are part of 'practising' the emotion and connecting with others (for instance, Hoffman (1975); Rheingold, (1982); Zahn-Waxler, Wagner, Radke-Yarrow.& Chapman (1992). Later, two studies of two-year-olds (Grusec, 2006; Hay, Fingerman & Lefkowitz 2006) found evidence of prosocial behaviours (sharing toys) in infants that observed mirrored facial expressions and the studies suggested that the purpose of such imitation of experiencing emotion promotes development of experiencing genuine emotion.

1.3.2 Prosociality and disposition

The individual variance of prosociality has been interpreted as evidence of a prosocial dispositional model across numerous studies. For instance, studies of twins would appear to indicate a genetic contribution (Knafo & Plomin 2006, and 2010), In these studies it was found that the influence of genes play a part in prosocial development; the researchers calculated quantifiable measures of 68% genetic likelihood of similar levels of prosocial behaviour using statistical modelling techniques. This difference was thought to be moderated by individual differences, individual values, and a belief in one's abilities. The experience of an individual and the interaction between genetics and the mitigation of environmental factors is explored by Caprara & Steca, (2007), who found that the context would change the response of individuals more so than individual temperament. Prosocial responses can be increased or decreased depending on the situation, rather than the individual (Caprara 2010). Studies have reflected prosocial levels as being consistent in studies in school settings (Graziano & Eisenberg, 1997) had previously established consistency in school-based, prosocial behaviours finding that a specific situation would result in similar

responses, irrespective of setting or time. Researchers with a breadth of interest across the topic such as Longobardi, 2016, 2020) Eisenberg (1988, 1992, 1996, 2012, 2016), Tintori (2007, 2021) and Cuyvers (2020), agree that prosociality requires an intention to bring about benefits for others. The associated behaviours similar to those behaviours that are consistent with empathic responses. There is evidence of the 'prosocial disposition' which appears to remain throughout life and develops at an early stage, as part of a cognitive model and present from early childhood. Interestingly, children with learning difficulties demonstrate lower prosocial behaviour (Arnold, Landry & Wood, 2010) than more able peers. Explanations for this tendency would fit the 'theory of mind' notion that in general, a limited understanding of the 'other' may lead to a lack of perspective taking. Perspective taking has found to be lower in children with learning difficulties (Wagamer 2020).

1.3.3 Prosociality and demographics

As indicated, prosocial capacity can also be understood as being socially constructed as is evident in the studies that demographic factors will influence prosocial capacity significantly and therefore, varies across demographic groups (for examples MacNeely and Marengo, 1994, King, 2005, Yao and Enright, 2022). There are mixed results in gender studies with some studies suggesting that females show higher levels of prosocial behaviour than males (Eisenberg, Zhou, Liew et al, 2006). However, for some studies, the opposite effect was found (Carlo, 2003). A possible explanation concerns the interpretation of different aspects within the broad definition of prosociality. The data collection was found to have a subsequent impact on the results in that the studies have differently defined 'prosocial' behaviours for each gender (Tintori 2021). To elaborate, the broad definition of helping,

caring and sharing encompasses different capacities and studies can therefore find mixed results depending on what aspect or behaviour has been measured. Females are more likely to exhibit caring behaviours whilst males are found to act in more 'helping' or to use Rankin and Eagly (2008)'s term more 'heroic' prosocial behaviour. Results can be dependent on the often subjective measure applied to 'caring', whereas helping when someone requires help may be less frequent.

Studies in prosociality and socio-economic factors contain similar contradictions, and the definition again appears to be broad enough to lead to some mixed results in the way the data is measured. Some studies have shown that having a low socio-economic status predicts more prosocial behaviours such as generosity, trust, and availability, related, it is hypothesised, to a requirement for closer social bonds due to community reliance and geographical closeness in more 'hostile' social environments (Robinson & Piff, 2017) whereas some studies have found that socio-economic factors are likely to inhibit prosocial development (Callan, Kim & Matthews et al 2017). A meta-analysis (Wu, Balliet, Yuan et al (2025) considered the research and found that in 471 cross cultural studies, using a combined sample size of 2,340,806, found an effect of social class with increased socio-economic factors leading to more prosocial behaviours. The study used adults and children participants where a commitment of resources was required. The results concluded that resource availability (both in material and non-material resources such as time) play the largest part in predicting prosocial tendencies.

Socio-economic factors are also linked to differences in workplaces and educational establishment; affluent childhoods lead to less severe workplaces and educational establishments leading to lowered exposure to levels of aggression and increased prosocial tendencies (Kosse, Deckers, Pinger et al.,2020, Benenson, Pascoe & Radmore, 2007). The

broad definition of prosociality in studies using socio-economic factors may lead researchers to prioritise some aspects of prosociality over others (for instance sharing may be more prevalent in poorer areas, whereas volunteering may be more prevalent in more affluent settings.

Relatedly, increased use of video games in childhood in areas of lower socio-economic status has been demonstrated (Ludwig & Phillips, 2008) and is suggested as linked to lower parental resources including time. Reduced parenting time is thought to be linked to increased risk of aggressive behaviour (Campbell, Conti, Heckman et al,, 2014). A consistent finding is that screen time decreases prosocial actions and increases the likelihood of antisocial and aggressive behaviours when accessing violent content (Anderson & Carnegay, 2009). Likewise, long-screen exposure is negatively associated with prosociality, especially with passive screen viewing including television (Sanders, Parker, Del-Pozo et al, 2019). It is proposed that spending more time in front of screens reduces parent-child interaction, resulting in less prosociality (Zhao, Li & Zang, 2019) and showed that was shown that violent video games reduce prosocial behaviour and increase hostility (Ferguson 2015).

1.3.4 Interventions in Prosociality

The significant role of parents has been explored in the home setting of parents and children and found an impact on prosocial skills when taught explicitly by parents to children. Studies have shown that there are benefits to the adults and child when encouragement is given to use prosocial skills in laboratory settings. The transferability from these studies into primary schools and the effectiveness of school interventions has been tested, both short term (over a day) and more long term (over an academic year) have been considered (Hyson & Taylor (2011) and it was found that interventions could lead to an increase in prosocial behaviours in

school settings when schools introduced such programmes. This transferability of skills will be considered in more detail in Chapter 3. However, it is important to highlight that interventions to increase prosociality are based on the principle that it can be changed. In contrast with the fixed and stable 'prosocial disposition' which characterises some research, it is important to consider research to evaluate interventions aimed at increasing the level of prosocial tendencies. Specifically interventions which aim at increasing prosocial behaviour through adult encouragement. Studies demonstrates that early childhood interventions, which include targeting specific children, schools, or families in early interactional quality and prosociality in preschoolers can improve educational outcomes within the primary school setting (e.g. Heckman & Kraus, 2013). Also there has been studies into reducing aggression (Crick, Ostrov, Burr et al, 2006) and small-scale interventions using nurturing parenting approaches have found reductions in the long term on the occurrence of aggressive behaviour and also increases in prosocial behaviour as a positive alternative for children and adolescents (Ostrov, Massetti and Staufacher, 2009). These studies would suggest a limited sample of studies that refute a fixed disposition in prosociality, although these studies were limited to measuring short-term impact without long-term impact measurements.

School based interventions to promote prosocial behaviour have been conducted with a view to help reduce aggression (Caprara, (2014). An interesting study (Jenkins, Fredericks and Nickerson *et al*, (2018) considered the motivations of children who intervene in bullying (and reduce bullying as a result). These children were found to have beliefs around their responsibility to care, share and help others and acted on these beliefs. The intervention was based on a whole school approach to build on these beliefs and embed them within the school community alongside encouragement from staff to intervene. The study found a reduction in

bullying and an increase in prosocial behaviour in the short term. However, the influence of others on adolescents has been shown to reduce prosocial behaviours during that period seem consistent, in that adolescents are less likely to follow adult instruction or accept moral codes without challenge. The power of modelling behaviour decreases as children mature, suggesting, the study concludes, that prosociality should be taught at early childhood rather than in adolescence (Muniak, Genschow, Dolinski et al,2024).

There is also evidence that as children develop in their cognitive abilities (Caprara 2003), the ability to differentiate among groups increases as does social status awareness. As a result, the act of being prosocial to a lower status group can provide some potential disadvantage (for some groups) and that as a result peer pressure could lead to discrimination of groups. Prosocial 'dispositions' are therefore to some extent competing with external societal demands in school or group settings, where group rules will impact significantly on an individual's choice. Other school programmes that have been shown to have increased prosociality in the short term include interventions which promote calmness in children (for instance through breathing exercises and mindfulness programmes). These programmes were found at implementation to have provided benefit to the school community of decreased aggression in classrooms (see for instance, O'Hare, Biggart, et al, 2015, Bellanti & Bierman, 2015).

A further influence on prosociality in young children is that often the reporting of prosociality is interpreted indirectly through a parent, carer or teacher. Prosociality is often based on perceptions rather than a fixed experimental condition. This perception is possibly evident in a study that shows that likeability scores in peer groups correlate negatively with prosocial ratings by teachers (Aguilar-Pardo 2022). Prosociality may therefore be to some extent in

(or at least influenced by) the eye of the beholder. This notion will be further explored in Chapter 3.

1.3.5 Prosociality, social groups and reputation

Peer-to-peer perceptions are also important influencers on the prosocial tendency. Englemann (2019) cited that from young children invest resources towards building a positive reputation from around age 5. As a consequence, a child's concern reduced engaging in behaviours such as cheating, if they could be seen by others. This, Englemann suggested, was not to be an avoidance of punishment but as further evidence that children in this age group will demonstrate prosocial behaviours when watched by others to improve their positive reputation. Children are found to be proactive and kind and will share their toys more often when observed by a witness. If children are observed by members of their own group or by individuals that have access to attractive resources, they show stronger concern for reputation and correspondingly higher levels of prosociality. This finding fits with the theory of mind in that as an awareness of the perspective of others, results in increased self-consciousness, and increased awareness of one's reputation throughout the school years. From around age 8 years old (at a similar age to when theory of mind is thought to have increased sufficiently), children have been found to start to reason about their own reputation explicitly. Studies have found that children will begin to interpret behaviour in terms of how they present to an audience (Caputi, 2012; Engelmann, Over, Herrman & Tomosello, 2013). Children around age 8 start to explicitly refer to self-presentational concerns when explaining behaviour in front of an audience. An earlier study by Aloise-Young (1993), found that eight-year-old, but not six-year-old, children fostered their reputation with strategies such as self-

promotion to increase their likelihood of becoming involved in games. Watling & Cappella (2012) found that children employ strategies to maximise their chances of being included. The implication of these studies is that prosocial action is a useful outward method (even at a young age) for winning acceptance or approval and less based on 'caring' than it is on compliance and acceptance within a group.

Heyman, Barner, Heumann, & Schenck, (2014) also suggested that older age range children also begin to show a degree of suspicion about how other children present themselves, demonstrating an awareness of strategies that influence reputation. Prosociality was rated by participants in the study positively when prosociality appears present in private rather than in public domains, reinforcing the notion that receiving benefits (in this case reputational benefits) can be reframed by the observer as less prosocial, despite the same behaviour being displayed

It might seem that demonstrating prosociality (including kindness and resource sharing) would be a strategy used by children to gain a positive image with peers and adults. However, Barclay (2012) found prosociality does not correlate 'more giving' to a prosocial reputation. Too much giving is viewed by this age range as leading to damage to reputation due to a factor of social comparison. Sperber & Baumard (2012) suggested that inappropriate generosity marks one out as being not taking account of group rules of appropriateness and as a marker of difference and non-compliance to the group. It also risks comparisons being negative ('his generosity makes me look bad'). Building a prosocial reputation is not to behave in an ultra-generous fashion, but rather to value fairness. Children do not simply want to seem generous in front of others but specifically attempt to demonstrate fairness (Shaw, Montinari, Piovesan et al, 2014). Children seem to understand this intuitively and rarely share more than a fair split when they are observed (Fu, 2016). Resource theorists (such as Hawley1999; 2008; Olthof, 2011) suggest that prosocial actions

are motivated in having control over resources and rely on skills in co-coperation, persuasion and reciprocity to access fairness in resource distribution.

1.4 Overview

Prosociality can be difficult to define and can have both external and internal features, is contextual, based often on reports from others, particularly with studies focused on children. Within definitions of prosociality requiring prosocial intent, measures are based on reports by others, and there can be challenges to establishing reliable methodologies. The tendency to act prosocially has been found to be relatively stable from childhood to adulthood. This tendency reduces at times (for instance in adolescence) possibly related to other factors on decision making such as reputation building and peer influence. Perceived prosociality in children has been found to be an indicator of increased likelihood of positive outcomes for later childhood and beyond. Studies tend to be based on reports from others observing these behaviours, but they appear to remain stable over time. Studies have demonstrated positive associations between increased positive measures relating to health, social inclusion and education, and negative associations with low reported levels of prosociality. Risk-taking behaviour is also associated with low prosocial behaviour. These associations are relevant to the study and further examination of these associations will be undertaken in this study as part of the multi-dimensional investigation.

Although prosocial behaviour has been found to be formed by some hereditary contributions, attitudes, self-efficacy and individual disposition also play a significant role in the decision to act (or not act) prosocially. Cognitive weaknesses such as weak attention, perspective taking or imaginative thinking are likely to reduce the capacity for developing empathy and

processing the needs of others, which may then reduce the capacity of prosocial action. However, prosocial action has also been found to be much influenced by external factors and social constructs. Schools are social groups and group behaviours and attitudes will significantly influence members. As such prosocial behaviour allows a declaration of group membership suggesting that group pressures and roles, both in school communities and wider communities will influence prosocial choices. For this study, these insights may provide value educators when identifying issues of social exclusion for young people. Teachers are able to tap into their own insights in the classroom microcosm when considering what a child needs for now and for the future. This study was intended as a method of identifying the robustness of teacher perception in prosocial behaviour and to identify how this resource could potentially be harnessed for supporting young people. For educational psychologists, in their capacity to provide context for teachers and psychological insight to support teacher understanding of a young person, teacher perception can be helpful in providing a robust assessment, and as part of an evidence-based consideration of a young person's needs. Chapter 2's Scoping Review allows a review of the current evidence base in prosociality for this purpose.

Chapter 2: A Scoping Review

2.1 Rationale

A scoping review was undertaken to explore the theoretical bases of prosociality and to clarify the definitions applied within the research base. A scoping review was chosen over a systematic review due to its suitability for mapping key concepts and definitions in emerging or fragmented fields, as recommended by the JBI Manual for Evidence Synthesis:

> There are a number of reasons why a scoping review might be conducted. Unlike other reviews that tend to address relatively precise questions (such as a systematic review of the effectiveness of an intervention assessed using a predefined set of outcomes), scoping reviews can be used to map the key concepts that underpin a field of research, as well as to clarify working definitions, and/or the conceptual boundaries of a topic (Pollock, 2023: Chapter 10.1.1 p182).

Further, the scale of the research in the area of prosociality is expansive, and within the professional doctorate study, there was a requirement for protocols which both served the purpose of study goals but were practical in synthesising the studies as related to the professional field. The scoping review was also based on Arksey and O'Malley's (2005) framework for synthesising and analysing theoretical bases.

2.1.1 Selection Criteria

Included studies were limited to prosocial studies undertaken in school settings.

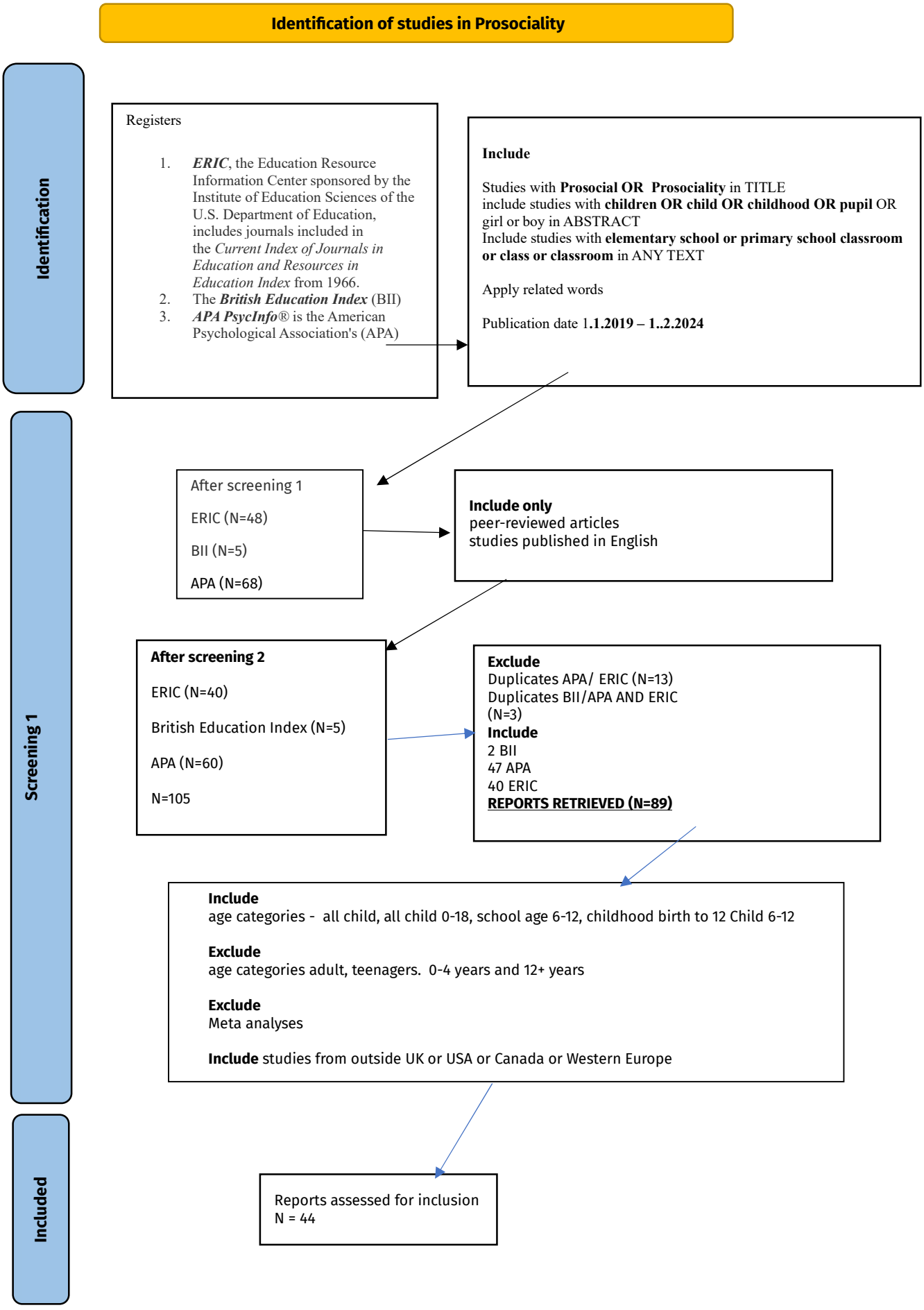
The cultural variance of prosociality led to a decision to focus on countries with similar value systems and therefore the study was limited to countries with broadly Anglo-European societies and education systems that would reflect that culture both in their systems and in perceptions of prosociality. UK, Europe, the USA and Canada were included and all other countries excluded*. Relatedly, all studies were published in English. The age of children participants was in the range of five to twelve years. All studies outside of this range (including age range overlaps) were excluded. Primary research studies published during the time period from February 2019 - February 2024 were included. Non-peer-reviewed studies were excluded, as were meta-analyses and other exclusions were 'grey' studies such as books.

*A further note is that Australia and New Zealand were excluded despite meeting the cultural similarities for the included nations within the scoping review. This led to a limitation of this review and a future review could include these studies.

2.1.2 PRISMA Flowchart

A PRISMA flowchart is presented in Table 1 overleaf, demonstrating the selection process for the included sample list.

Table 1: PRISMA Flowchart



2.1.3 Process

44 included studies were explored for their definitions of prosociality and their source where provided (as shown in Appendix 1). The studies were explored for a given definition, and the citation for this definition, where given. A full reference list for included studies is provided in Appendix 2.

The included papers were then explored to identify the definition given in the study. For some studies, a definition was given without a citation to its provenance. Table 2 presents the definition with citation where given.

Table 2: Definition given within included studies 1- 44 with citation where given:

	Definition of Prosociality (given)	Cited as:
1	Prosociality is a multidimensional construct incorporating acts intended to benefit others (e.g. helping, sharing, comforting)	Eisenberg (1992)
2	Prosocial behaviour can be broadly defined as actions aimed at favouring other people	Batson and Powell (2003)
3	Prosocial behaviour—voluntary action intended to benefit others	Eisenberg (1992)
4	Behaviours across contexts and motives; (i.e., helping, sharing, and comforting)	Carlo and Randall (2002)
5	The prosocial actions included in the current study are direct intervention (e.g., attempt to stop bullying in a non-aggressive way or distract a bully), emotional intervention (e.g., help the victim by making them feel better), and involving an adult (e.g., tell a teacher, principal, or parent).	Not given
6	Prosocial behaviour defined as any voluntary behaviour intended to benefit another person, such as helping or comforting.	Eisenberg (1992)
7	Young people also need prosocial competencies. They need empathy and perspective taking as well as the ability to develop meaningful and collaborative relationships with others.	Not given
8	Prosocial behaviour can be broadly defined as low-cost actions aimed at favouring other people	Batson and Powell (2003)
9	Prosocial behaviours are characterized by the intention to benefit others through acts such as sharing, helping, comforting, and protecting	Eisenberg (1992)
10	A set of actions that are intended to aid or benefit another person or groups of people without the actor's expectation of external rewards	Eisenberg (1992)
11	Two facets of socio-emotional skills at the beginning of primary school: Prosocial behaviour and peer relationships.	Not given
12	Prosociality is a multidimensional construct incorporating acts intended to benefit others (e.g. helping, sharing, comforting;	Eisenberg (1992)
13	Prosocial behaviour in the sense of intentional, voluntary, and sometimes altruistic helping behaviour	Not given
14	The domains of social awareness and relationship skills are indexed by a wide-ranging rating of children's behaviours called prosocial school behaviours.	Not given

15	Prosocial behaviour has been typically defined as voluntary behaviour intended to benefit another person	Eisenberg and Faber (2016)
16	Prosocial lies, also commonly known as "white lies," are false statements that are intended to deceive others, to their advantage and sometimes at the expense of the person who told the lie	Not given
17	An ability to help, empathize and support others. Prosocial behaviour, as part of the social skills' sphere, can also be described as a voluntary action that has a clear goal of benefiting others	Eisenberg (1992)
18	Not given	
19	Prosocial behaviour has been defined as voluntary, intentional actions that result in benefits for another individual or group	Caprara (2005)
20	Helping, sharing, and co-operating	Dunfield and Kuhlmeier (2013)
21	Acts performed with the intention to benefit another	Penner 2005
22	Not given	
23	Prosocial behaviour entails voluntary acts that benefit others such as co-operating, kindness and sharing.	Eisenberg (1992)
24	Not given	
25	Prosocial behaviour involves low-cost voluntary acts intended to benefit others, such as expressions of empathy or helping behaviour	Hastings, McShane, Parker & Ladha,
26	Not given	
27	Prosocial behaviour has been defined as voluntary behaviour meant to benefit another individual;	Carlo and Randall
28	Prosociality refers to behaviours that are positively responsive to others' needs and welfare behaviours that are helpful and affiliative responses to others: responses to signs of suffering, need, or danger in another person or animal, such as assisting, sharing, being kind and considerate, comforting, co-operating, protecting someone from harm, rescuing someone from danger, and feeling empathy and sympathy	Radke-Yarrow & Zahn-Waxler (1986)
29	Not given	
30	Not given	
31	Prosocial behaviour has been defined as voluntary behaviour intended to benefit another, including helping, sharing, comforting, and volunteering	Eisenberg (1992)
32	Positive attitudes toward the outgroup as a whole and motivate a desire to help	Taylor (2020)
33	Prosocial behaviour involves voluntary acts intended to benefit others, such as expressions of empathy or helping behaviour	Hastings, McShane, Parker,& Ladha, 2007)
34	Not given	
35	Prosocial behaviour is characterized as positive and voluntary behaviour directed towards the benefit of others, such as helping others get something they want, sharing toys, and comforting and caring for others when they are sad.	Eisenberg, Fabes and Spinrad, (2006), Eisenberg, VanSchyndel and Spinrad, (2016)
36	Understand own emotions and those of others, show empathy, regulate their emotions, pay attention, regulate behaviour, express emotions appropriately, make good decisions in response to the social problems that they will encounter, and engage in many prosocial behaviours	Denholm (2006)
37	Voluntary behaviours intended to benefit others	Batson & Powell (2016)
38	Voluntary behaviours aimed to benefit others	Eisenberg (1992)
39	Prosocial behaviour can be defined as behaviour that is meant to benefit others rather than oneself [10] and results from a process consisting of three subsequent steps reflecting 1) the ability to take perspective, 2) the ability to determine the cause of the problem, and the wish to help the other	Eisenberg (1992)
40	Prosocial teasing is generally defined as an ambiguous social provocation that is intended to playfully express something to the target	Keltner (2001)
41	That is, experiencing empathy for members of the opposing group may sensitise children to their well-being, which may generalise to more positive attitudes toward the outgroup as a whole and motivate a desire to help	Taylor (2020)
42	Cooperation and positive interactions.	Not given

43	Prosociality was assessed by asking students which classmates often helped other children.	Not given
44	Prosocial behaviour can be defined as positive and voluntary actions done towards other individuals benefiting them in some way	Eisenberg and Faber (2006)

Behavioural terms of prosociality were isolated, then considered for consistency of themes including intentional behaviour/consequential behaviour and intended benefit/consequential benefit. As such, studies following their categorisation by definition and citation were analysed for three further categories: prosocial behaviour or trait, prosocial intent and prosocial benefactor, as shown in Table 3:

Table 3: Analysis of Prosociality by behaviour, benefactor and by intent

Raw Definition and Source		**Analysis of term**		**Positive outcome**
Definition Provided:	**Citation**	**Behaviours or trait**	**Prosociality behaviour as intent or consequence**	**Who benefits?**
Voluntary behaviour intended to benefit others that may include helping caring sharing or protecting	Eisenberg (1977, 1998, 2006, 2012)	Helping, caring, sharing, protecting	Intentional	Others
Actions benefiting or favouring other people	Batson and Powell (2003)	Favouring, benefitting others	Consequential	Others
Engage kindly with others across contexts and behavioural expressions (i.e., helping, sharing, and comforting	Carlo and Randall (2002)	Helping, sharing, comforting	Intentional and consequential	Others
Socio-emotional learning	Denham (2006)	Not given	Not given	Not given
Behaviours that are positively responsive to others' needs and welfare and behaviours that are helpful and affiliative responses to others: responses to signs of suffering, need, or danger in another person or animal, such as assisting, sharing, being kind and considerate, comforting, co-operating, protecting someone from harm, rescuing someone from danger, and feeling empathy and sympathy	Radke-Yarrow and Zahn-Wexler (1986)	Assisting, sharing, comforting, protecting, rescuing	Consequential	Other people or animals
Prosocial behaviour involves voluntary acts intended to benefit others, such as expressions of empathy or helping behaviour	Hastings, McShane, Parker, & Ladha (2007)	Expressions of empathy, helping	Intentional	Others
Helping, sharing, and co-operating	Dunfield and Kuhlmeier (2013)	Helping, sharing and co-operating	Consequential	Not given
Positive attitudes towards the outgroup that motivates a desire to help	Taylor (2020)	Helping	Intentional	Group
Intention to help another	Penner (2005)	Helping	Intentional	Individual
Behaviour designed to benefit others	Kidron and Fleischmann (2006)	Benefitting (others)	Consequential	Others

Behavioural and cognitive skills that underpin voluntary, positive behaviours towards others	Padilla-Walker (2016)	Helping, co-operating, turn-taking, empathising, and trusting	Intentional and Consequential	Others
Caring sharing and friendship, Co-operation and positive interactions, meaningful and collaborative relationships with others,	Source not cited	Caring, sharing, Co-operating, Collaborating, Helping,	Consequential	Others
Definition given in opposite to aggression and externalising behaviour	Source not cited	(Not) Bullying, (Not) Aggression (Not) feel bad or guilty when he or she does something wrong, and shows a general lack of concern about the negative consequences his or her actions	Consequential	Not given

The specific definitions were provided in the included studies were then categorised for frequency as shown in Table 4.

Table 4: Frequency of specific definitions presented

Definition Provided:	**No. of Studies using definition within sample range**
Voluntary behaviour intended to benefit others that may include helping caring sharing or protecting	15
Actions benefiting or favouring other people	3
Engage kindly with others across contexts and behavioural expressions (i.e., helping, sharing, and comforting	2
Socio-emotional learning	2
Behaviours that are positively responsive to others' needs and welfare and behaviours that are helpful and affiliative responses to others: responses to signs of suffering, need, or danger in another person or animal, such as assisting, sharing, being kind and considerate, comforting, co-operating, protecting someone from harm, rescuing someone from danger, and feeling empathy and sympathy	1

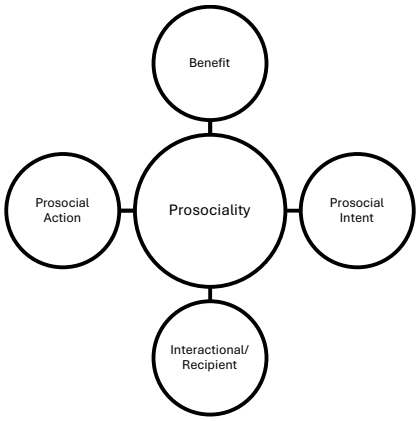
Based on the included studies, this scoping review has identified a definition which has a thematic consistency where definitions are given, and the component parts are as follows:

- Prosocial behaviours were most often isolated as ‘helping, caring and sharing’ behaviours although some studies expanded to behaviours such as ‘collaborating’ and ‘protecting’.

- Prosociality requires an interaction between the prosocial actor and a recipient or recipients.
- Prosociality requires a positive outcome for another or others which provides emotional, practical or physical benefit.
- Prosociality requires prosocial intention. A prosocial individual who intends to provide benefit but fails (for instance a child wants to help but hinders in the process) may be prosocial whereas the accidental benefactor who had no such motivation does not.

Component elements of prosociality, based on the definitions used within 44 included studies are modelled below in Figure 1.

Figure 1: Component Elements of Prosocial Definition



2.2 Theoretical Bases within the Included Studies

All studies were explored for theoretical underpinnings and where given, were identified and categorised in Table 5 per study. Appendix 3 provides an expanded table with author and publication detail.

Table 5: Theoretical Underpinnings for included studies

No.	**Theory of prosocial development (where given)**
1	Attachment Theory (Bowlby (1969) – the relational impact on prosociality levels of children
2	Attachment Theory (Bowlby) (1969) – the role of trust with caregivers for the development of prosocial skills
3	Social Learning Model (Bandura) (1973) Prosocial as a development need for individual's moral identity for collective good
4	Social Information Processing model - deficits and biases in processing social cues and empathic concern including perspective taking can act as cognitive precursors in determining children's prosocial levels (source not cited)
5	Social Emotional Development of Empathic Concern in childhood (source not cited)
6	Multidimensional Model including the development of cognitive processing mechanisms such as perspective-taking to in the development of prosocial behaviours (source not cited)
7	Social Learning Theory (Bandura) (1973) – socialisation processing as a motivator for the development of prosocial behaviours
8	Bronfenbrenner's bioecological model of prosocial development (2005)
9	Seligman (2002); Seligman, Ernst,Gillham, Reivich & Linkins (2009) Positive psychology, focus on 'building positive qualities'
10	Positive Psychology (Seligman, 2000; Seligman & Csikszentmihalyi (2002), - Mindfulness and positive peer relationships' contribution to the development of social-emotional and cognitive skills
11	A social-developmental approach to self-concept affecting prosocial outcomes and therefore, children construct their self-concept based on the social relationships they have, the feedback they receive, the social comparisons they make, and the cultural values they endorse (Bandura) (1973)
12	Eisenberg's Theory of Prosociality (2002) and empathic development.
13	Eisenberg's Theory of Cognitive development (1983) of executive functions the theory of mind, cognitive empathy, and prosocial development
14	Eisenberg's Theory of Prosocial behaviour (2016) and developmental and multi-dimensional model of biological, contextual, and psychological factors, and individual experiences
15	Hawley's (1999) Resource control theory proposes that both coercive and prosocial resource control strategies can bring social dominance and popularity
16	Empathy as a multidimensional construct. Affective and cognitive empathy are related - a better understanding of others' emotions leads to prosocial behaviour (Cuff, Brown, Taylor & Howat, 2016) Bernstein and David (1982) Cognitive empathy refers to the understanding of another person's feelings and relies on perspective taking or mentalising processes Singer & Lamm(2009) - affective empathy includes sharing similar emotions (emotional contagion) or feeling sorrow or concern for the observed other (empathic concern) and to a lesser extent, emotional disconnection
17	Attachment and attunement (Bowlby (1969) Models of teacher attunement when assessing prosocial characteristics
18	Eisenberg's theory of prosocial development (1983) Empathy and Perspective Taking (Cavell 1990) - a tri-component model of social competence operationalizes social competence into three underlying social status – social performance, social skills and social goals. .
19	Group interaction study of the interplay of cohesion and stress relating to peer aggression and prosocial behaviour
20	Social Learning Theory (Bandura 1977) Behaviours are socialized through such processes as information exchange, modeling, and reinforcement
21	Not given
22	Frick, Ray, Thornton et al, 2014) Levels of irritability in children was significantly correlated with internalizing the absence of emotions that foster prosocial skills.
23	Social Learning Theory Children seek to belong to and be accepted by social groups and look to environment for models(Wentzel) (2003). Children look to significant adults, including teachers, to provide them with models on how to behave in given social conditions and to protect them from those things that, for a child, are scary or harmful, such as aggressive and abusive classmates (Platten, Hernik, Fonagy, & Fearon) (2010).
24	Eisenberg's model of multitude of factors affecting the development and expression of social skills The Socio-Cognitive Integration of Abilities model (Beauchamp & Anderson 2010) prosocial behaviours are determined by a set of cognitive and affective abilities, influenced by internal factors (e.g., temperament or personality), external factors (e.g., family environment or socio-economic status), and functions linked to brain development and integrity.
25	Attachment theory (Bowlby) (1969) Internal Working Models about attachment mediate the link between reactive aggressive disorder and prosocial behaviour problems in middle childhood (based on mental representations about the care-related interactions with the caregiver) Waters and Waters's basis for secure Internal Working Models and need for a Secure Base Script
26	Group processes intergroup contact models of conflict resolution (not cited)
27	Bandura's Social Learning Theory (1973) – aggression and prosociality is learned and enacted through the desire to achieve a specific goal

28	Eisenberg's Theory of Prosociality (1993) - Young children's prosocial decisions are primarily driven by egocentric concerns
29	Not given
30	1. Bowlby (1969)'s attachment theory and developmental framework accords a central role to mental representational models, or internal working models, that children acquire and develop through repeated interactions with their primary caregiver 2. Pianta's An attachment theory framework (1999) reflecting a dynamic set of feelings, beliefs, personal attributes, and behaviours of the self, the significant other, and the mutual relationship
31	Seligman (2002) Positive Psychology suggesting prosociality is a path to greater well-being.
32	Prosocial attachment figures and intense social interactions as two main drivers of child prosociality. 1. Prosocial attachment figures are highly prosocial individuals with a close social connection to the child. They enable children to observe and imitate a prosocial role model and thereby internalize prosocial beliefs, preferences, and behaviours (Attachment theory, Skinner 1953) 2. Intense social interactions are joint activities that foster social reinforcement and feedback (Eisenberg, and Fabes 2006)
33	Eisenberg and Padilla (2016) – A Multidimensional theory of prosociality comprising: 1. Cognitive factors (empathy-related responding, emotion regulation) 2. Contextual factors predictive of prosocial behaviours (e.g., parental socialization, teacher–child relationship)
34	Not given
35	Prosociality and self-regulation may relate to each other in temporally specific ways across development (Eisenberg's theory of prosociality)
36	The Social Identity Development Theory [SIDT] (Tajfel) 1978) 1. An individual's self-concept is partly derived from their membership in social groups and from the emotional significance that they attach to the group 2. Nesdale's (2004) interpersonal framework for studying the interplay between children's emotions and behaviours toward ingroup and outgroup others.
37	Social Learning Theory (not cited) – the development of certain socio-emotional competences, specifically different components of emotion comprehension, will moderate negative emotions, and prosocial behaviour
38	Eisenberg's theory of prosociality 1. Engaging in prosocial behaviour requires several socii-cognitive abilities, such as holding a theory of mind, adequate processing of social information, and the ability to effectively regulate emotions 2. Moral affect theory (e.g., feeling guilt or empathy) and moral cognition (e.g., moral reasoning and perspective-taking) also shape prosocial behaviour (Laible, Carlo, Murphy et al 2014)
39	Group behaviours and social identity Theory: 1. Empathy may depend on underlying cognitions, such as social essentialist beliefs, that is, believing that certain social categories have an underlying essence that causes members to share observable and non-observable properties. 2. Empathy for salient outgroups can promote positive intergroup attitudes and prosocial behaviours.
40	Batson & Powell, (2003), Eisenberg and Faber (1992) Sroufe and Rutter (1984) 1. Basis of problematic and antisocial behaviours. . Core adaptive processes, such as self-regulation, which are thought to influence adjustment in multiple domains, over time, and across the adaptive continuum 2. A framework of developmental psychopathology – a shared set of adaptive systems underlies both positive and problematic adaptation.
41	1. Eisenberg Theory of Prosociality (1992) social-cognitive, emotional and moral development progresses (e.g., empathy, perspective-taking skills), corresponds to prosocial behaviours 2. Children may become more selective in their use of prosocial behaviours, coinciding with either a normative decline or stability across time based on response from others (Hay and Cook 2007, Eisenberg 2015).
42	1. Sociocognitive theory suggesting positive interactions with parents, teachers, and peers create an environment with rich language and social exchanges that promote children's cognitive development (Newman, 1991). 2. Prosocial behaviours promote a supportive peer relationship and teacher–student relationship, which may intensify children's school bonding and create the feeling of security and self-efficacy (Barbaranelli, Caprara, Rabasca & Pastorelli, (2003). 3. Intervention studies have demonstrated that promoting prosocial acts has positive effects on academic development (Caprara , Kanacri, Gerbino et al.) (2014). 4. Bi-directionally, academic competence may influence students' prosocial behaviour as low academic achievers may have a negative school attitude, have low self-esteem, and grow isolated from class groups, (Coie & Krehbiel) (1984)
43	Not given
44	Not given

The included sample list following categorisation by theoretical basis was summarised by frequency and is shown in Table 6.

Table 6. Cited theoretical basis by frequency (N = 44)*:

Theory presented as basis of study*	
Attachment theory (e.g. Skinner, Bowlby)	7
(Socio-Cognitive Processing) Theory of Prosociality (e.g. Eisenberg, Batson and Powell, Rutter)	13
Social Learning Theory (e.g. Bandura)	8
Social Identity Theory (e.g. Tajfel)	3
Positive Psychology (e.g. Seligman)	3
Bio-ecological Model (e.g. Bronfenbrenner)	1
Resource Control Theory (e.g. Hawley)	1
Theoretical underpinning presented but not cited	5
Theoretical underpinning not given	5
Total including (two overlaps)	46

*Although there is overlap between a number of the theoretical underpinnings within the studies (for instance Social Learning Theory and the Multidimensional Theory of Prosociality) the theories are given as cited in the included research studies.

The referenced theories found within the scoping review proposed different models of prosocial development. The component elements of prosociality, proposed within the theoretical framework are given in Table 7 (see expanded theoretical summary for reference in Appendix 4).

Table 7: Identified theoretical frameworks

Theoretical framework	Prosocial Motivation	Low Prosocial
Attachment theory (Bowlby, Harlow and Skinner)	Bonding and Attunement with care giver	Lack of trust can grow over responses from care giver which creates emotional needs that impede relationships with others including teachers.
Bandura's Social Learning Theory (latterly Socio-cognitive theory)	The mechanism for the development of all skills, including prosocial skills is about the child's capacity to internalise what they are perceiving and building an internal bank of responses to particular stimuli.	For a child to become prosocial, the child would need to witness and absorb the positive impact of prosocial action. Witnessing negative reinforcement would alter behaviour accordingly
Eisenberg's theories of moral reasoning	Cognitive skills including perspective taking develops in through a stepped developmental process. Prosociality develops from the child's capacity to understand the needs of others based on their development of empathic concern.	Environmental factors and internal cognitive level can hinder the internal cognitive development of perspective taking.
Social Identity Theories (Hawley's Resource Control Theory)	Prosocial skills within this set of theories increases group harmony and is based on an evolutionary advantage based on primitive drivers of behaviour undertaken to gain acceptance and access to resources. groups can result in outgroup hostility	A lack of group identify can reduce prosocial action and increase outgroup hostility
Bronfenbrenner's Ecological model	Environmental factors and life experiences during childhood will influence achievement and success in social interactions and prosocial intention takes place based first seeing and replaying the actions	Low prosocial behaviour would be a response to a lack of learning opportunities and an emotionally unsafe environment

2.3 Measurement tools for prosocial behaviour

The studies were explored to consider how each study measured prosociality. Specifically, measures were identified by research method as having an experimental design or based on reporting methods or both. Where experimental design was applied consideration was given as to what observable data were gathered and for reporting measures, consideration was given as to who provided the data. These measures were considered to identify both the external behaviours associated with 'prosociality' and the subjective requirements of measuring intent and reward.

All studies were explored for the measurement tool used for data collection as shown in Table 8.

Table 8: Measures used in studies of prosociality (see Appendix 5 for an expanded table with details of the assessment tool)

Measure	N = 44 studies	Data Collection
Strengths and Difficulties Questionnaire (Goodman, 1997)	19	Teacher or carer reports
Prosocial Behaviour Scale (PBS) (Caprara, Steca, Zelli, & Capanna (2005)	3	Self-report
Elementary Social Behaviour Assessment (ESBA) (Pennefather and Smolkowski, 2015)	1	Teacher report
Revised Peer Experiences Questionnaire (Prinstein Boergers & Vernberg 2001)	2	Self-report
Sociometric measure (qualitative measure aspects of social relationships) (Peery, 1979)	1	Teacher report
Children's Social Behaviour Scale (Weir & Duveen 1980)	3	Self-report
Topper Questionnaire, (Vliek)	1	Self-report
Big Five Questionnaire French* version (Olivier and Herve, 2015)	1	Self-report
Child and Adolescent Disruptive Behaviour Inventory (Burns and Lee, 2010)	1	Diagnostic Clinician
Social Challenge (Denham, Bouril and Belouad, 1994)	1	Task Presenter
Peer nominations (uncited)	2	Peer reports
Chocolate, Star and Money sharing observations (House 2012)	2	Scored on behavioural response
Donation task (Grusec and Redler, 1980)	1	Scored on behavioural response
Social Behaviour Questionnaire (Tremblay, 1991)	2	Self-report
Semi-structured Interview designed for study (Parsons, 2019)	1	Self-report
No measure indicated	3	

- Schools in Canada list English and French as official languages and the French questionnaire was used within the context where French is spoken at a level of academic confidence. French assessments were not considered within the studies as a second language but as an official language of the country.

A summary of measures can be found in Appendix 5.

- 35 studies deployed previously validated and established measures of prosociality using teacher reports, self-reporting or peer reports. A further six included experimental design with three not reporting the measure used in the study.
- Self-reports formed the basis of the prosocial measure in 11 studies.
- Teacher perceptions of prosociality were the measure used in 21 studies. Of these, 19 studies used Goodman's (1997) Strengths and Difficulties Questionnaire Prosocial Profile (SDQ).

The SDQ is a measure of teacher perceptions of prosociality through a questionnaire and there is no added behavioural or experimental design within these studies that seek to confirm the perceptions with behaviour.

Within the included studies using self-reports from children, common design limitations were noted by researchers. For instance, children's self-reports have been found to be of particular interest in gaining a child's perceptions in general but are unreliable when describing potential weaknesses. Arslan, Asanjarani, Bakhtiari & Hajkhodadadi (2022) suggested that some children (with a higher ability level) or adults were more able to accurately self-report than most children. They found that for younger children (including the 5–12-year-olds) variation could be present in the child's capacity for language, particularly when using non-definitive vocabulary including adjectives. Objective interpretation from a young child is likely to align with what they perceive as socially desirable. This difficulty is further highlighted within a 2003 review of the 'Big 5':

> 'Whilst trait adjectives seemed at first the more natural personality markers to use, we discovered that these terms present clear difficulty especially for younger children. In fact, children tend to catch mainly the ''concrete'' meanings of trait terms and tend not to understand their ''abstract'' meaning in

> relation to human personality (e.g. the term ‘‘cold’’ is not understood in its metaphoric meaning). When we used 50 trait adjectives to obtain self-reports from 10-year-old children, we obtained a solution that mainly reflected this situation, with no more than two latent factors that explained the covariances among the 50 adjectives. These results prevented us from further developing an adjective measure for self-report’. (Barbaranelli, Caprara, Rabaschi & Pastorelli (2003) p. 2.2).

Relatedly, significant research to overcome the issue around the reliability of children’s responses has a history of research including the Innocenti project (1992) around children’s participation and capacity for involvement. A number of approaches to support children to have a ‘voice’ have attempted to overcome socio-economic, cultural, and disability barriers. The Innocenti report highlighted the difficulty of the power imbalance between adults and children in direct research designs which well-intentioned researchers can attempt to navigate but remains a particularly difficult barrier for researchers. The vulnerability of children within research contexts continues to pose this difficulty and may explain that for a measure of prosociality, given its interactional basis, that assessments from adults who know children well are more able to provide at least some more objective measures.

2.4 Overview

The definition of prosocial behaviour is largely consistent and researchers in the field have broad similarities to Eisenberg’s 1992 definition as voluntary helping, sharing and caring actions and signals a desire to help another (similarly, Eisenberg & Fabes, 1998; Caprara 2005; Tintori, 2021; Carlo & Randall, 2002; Caprara 2005; Batson & Powell, 2003). Prosociality for the included samples was also defined as low-cost and therefore distinct from altruistic actions that have higher cost to the individual. The benefits of these relatively small

low-cost actions (Batson & Powell, 2003, Hastings, McShane, Parker & Ladha, 2007) were found in schools to increase harmony and group cohesion. However, behaviours are viewed as prosocial only if other criteria are present; prosocial behaviour requires a prosocial motivation, a prosocial recipient (i.e. based on an interaction with another) and a prosocial benefit. Hence, when prosocial behaviour is assessed for the purposes of research, it requires a level of subjective judgement from the prosocial rater. Similar behaviours might therefore vary due to the level of prosocial intention so will require interpretation of the intention. For instance, a child may volunteer to help but could have a non-prosocial intention such as seeking reward.

Prosocial motivation as a component of prosociality is cited by researchers who apply Eisenberg's definition but was found to be less scrutinised in later research. It was found that prosocial behaviour implied prosocial motivation, but less emphasis was given to Eisenberg's clarity that prosocial behaviour for personal gain such as a reward, was not prosocial. Some researchers cited theorists (such as Hawley's Resource Control, 1999) and raise the difficulty of establishing an absence of rewards, (for instance, an individual may feel rewarded intrinsically) and there are some researchers who cite Eisenberg's definition but place less emphasis on motivation.

Theoretical bases for the development of prosociality were drawn from social constructionism, cognitive theories of child development, attachment theory and to a lesser extent humanist theories of positive psychology. The context or situation of a child's development, along with their dispositional attributes were proposed as playing a role, and although not mutually exclusive, the scoping review found that the roots of prosociality when explored, revealed a complex and multiparadigm base.

The scoping review found that the underlying learning theory base led to some researchers placing more or less emphasis on either situational or dispositional roots. Some researchers (Tintori, Ciancimino, Palomba, et al, 2021), deployed Bandura's Social Learning Theory 1968) suggesting that prosocial action begins with mimicry and therefore increased (or decreased) based on the child's experiences and context. Other researchers such as Yao, 2023) cited Eisenberg's model of prosocial development within a socio-cognitive approach of child development based on Piaget (1962). This emphasised cognitive stages that allow for prosocial development based on individual differences in perspective-taking and reasoning capacities. These dispositional approaches were found to link prosocial development to theory of mind and capacity for empathy. In research which proposed attachment theory (such as Jambon & Malti, 2022) based on Bowlby, (1965) as a theoretical basis for prosocial development, researchers took a view that low prosociality was indicative of unfulfilled needs in interactions and relationships linked to early childhood relationships and therefore impacting on the capacity for trust and development of bonds with others. Researchers also implied that securely attached children are more likely to be prosocial, having had their basic physical, security and emotional needs met, alongside a consistent home/school/community value base. Some researchers cited Bronfenbrenner's model (2005) considering a mixed interplay of environment, individual traits and emotional development, all of which play a significant role in developing prosociality and specifically where prosocial development has been impeded.

A range of paradigms were found to be in use to explain prosocial motivation. For instance, prosocial motivation within earlier models of empathy based on a socio-cognitive foundation. These studies considered empathic concern as being formed as part of a developmental stage (such as Batson, 1998; Eisenberg & Fabes, 1998; Sibicky, Schroeder & Dovidio, 1995). Other researchers based on social learning theories, a child develops prosocial intent from

others in their environment (theories such as Bandura, 1973). Alternative theories such as resource control theories focused on the motivation or need for group acceptability to access resources.

The child's ability to work prosocially in a classroom setting within the research was found to be perceived positively by teachers (Volodina, 2023). Prosocial behaviour was not found to be objective but based on teacher knowledge of the child. Prosociality is presented within research in schools as being appropriately rated by teachers who are able to make assessments based on their prior knowledge which allows for subjective understanding of motivations. The scoping review emphasised that prosocial behaviour, albeit, subjective small in gesture and low in cost, is given importance by researchers because it links with more objective and more positive outcomes for the future.

The scoping review found that researchers presented prosociality as explicit and measurable behaviours but that assessment of prosocial behaviour required more subjective assessments in children of adults who know them well. The interpretative quality of prosocial assessment was found to be high.

Research of prosocial behaviour in children was found to seldom rely on experimental design and most frequently relies on reports from adults through questionnaires and rating scales. This results in prosociality relying on subjective judgements. Measurement tools to assess both prosocial behaviour along with prosocial intention were found to be complex but an important consideration. Some prosocial behaviours are more identifiable than others; helping behaviour is more visible whereas caring is arguably less so and arguably requires greater interpretation by the observer in a range of associated signals (such as facial expressions or using kind words). As such, this study found that prosociality when referred to within the evidence base could be inaccurate and would be more accurately described as a *perception* of prosociality. This subtle but important difference was not found to be

emphasised in studies. For studies in schools, it is of particular significance. As shown in Chapter 3, teacher perceptions of children have been found in large scale studies (such as Rosenthal, 1968) to be highly subjective with multiple contributory factors.

Goodman's SDQ Prosocial Profile (1997) was found to be a questionnaire most often used in research within this sample list to measure prosociality through teacher ratings. The profile has been tested frequently for reliability and validity and teachers are considered reliable contributors using this method. Further consideration of the Goodman's SDQ is given in Chapter 4.

2.5 Scoping review implications

The implications for teachers and educational psychologists, based on the included sample was that teachers can make subjective ratings of prosociality (linked to positive outcomes in later life), and these subjective ratings are based on their perceptions of children. Dispositional factors such as cognition, approach to tasks and temperament were found to contribute to prosocial perception alongside situational factors including demographics, school organisation and family values. The quality of the teacher/child bond was also a contributory factor on ratings which is influenced partly by time spent together. Both this study and previous research from leading researchers in the field such as Eisenberg (1992) Longobardi (2016) and within this scoping review, Tintori (2021) have formed conclusions based on teacher perceptions of prosociality. Perceived prosociality based on teacher perceptions, appears to be a strong predictor of increased likelihood of successful outcomes

This association could be prone to over-interpretation if causation were inferred. It would be appealing for schools to consider that outcomes for children can be influenced by

prosociality, and to promote prosocial behaviour as a means to accessing increased likelihood of positive outcomes. This lesson for educators is emphasised in reviews of interventions such as 'The Gratitude Project' (Renshaw, & Olinger, 2022) where an intervention was undertaken on a seemingly causal link between showing gratitude and improving behaviour in schools but evaluated in their meta-analysis as being correlated but not causal. Therefore, awareness of the limitations of these findings is particularly important. Promoting prosocial action to create a prosocial child is overly simplistic.

Chapter 3: Prosociality for Schools

3.1 Considering the School Context

The aim of this study is to consider how findings in this area may be useful to schools to better support young people. Therefore, in order to further consider relevance for schools, a review of the literature on prosociality, pertinent to schools and teachers was required.

Teacher ratings of prosociality were found to have been the most frequent measure of prosociality for primary age children. This third person rating of prosociality has already been emphasised; third party ratings are more accurately described as being prosocial perception rather than prosociality per se. On this basis, research around factors that influence teacher perceptions were considered.

Theorists such as Bronfenbrenner (1972) proposed both situational factors (such as home environment) alongside dispositional factors (such as cognitive level). Specifically situational factors of gender and socio-economic groupings were given specific consideration. Dispositional factors given close consideration included models of development such as Piaget (1928) or Kohlberg (1963) comprising individual components of cognition and their influence on the development of individual capacities. This study sought to consider the evidence for dispositional factors in the development of prosociality with particular respect to theories of empathy (such as Eisenberg 1996).

Consideration of the body of literature with regards to school specific factors that influence prosociality was also given to researchers (such as Van Den Berg, 2010) to explore class groupings, relationships and layout.

Studies within the scoping review had some variation in definitions with regards to the voluntary nature of prosociality with researchers such as Eisenberg (1996) proposing that actions are not prosocial if motivated by reward. The question of whether prosocial action is voluntary is particularly relevant when consideration is given to whether teachers can teach this skill through rewards, or coercion. An exploration of interventions that pertain to prosociality was undertaken to consider the validity of programmes that encourage prosocial behaviour.

As per the scoping review, measures of prosociality are, within school contexts, and for primary school children, based on teacher ratings. Teacher ratings are based on teacher perceptions of a child. Consideration of the basis and impact of teacher perceptions in school was therefore required, through the research base exploring links between teacher perceptions and learning. Abikoff (1993) linked teacher personal values to the perceptions of a particular child and found that teacher preferences impact on a child's ratings. This study found that teacher values were found to be a significant variable on scorings for children. Teachers have been found to form representations of classroom groups based on their own subjective experience. For instance a study found that depressed teachers have been found to rate children lower on scales for social interaction and prosociality (Youngstrom, Loeber & Stouthamer-Loeber, 2000). This tendency can also be found to reduce reliability in these ratings from particularly positive teachers (Berg-Nielsen, Vika, & Dahl, 2003). Questionnaires and rating scales, by their nature may reflect individual values particularly in less objective measures such as social interactions and intentions. In prosociality measures (due to its interpersonal quality) there is a frequent use of questionnaires, and the subjectivity of such questionnaires is not routinely emphasised. However, bias and personal attitudes when they affect scorings are significant factors and will play at least some role (Marsh,

2012) when considering the reliability of data collection from questionnaires and therefore a clearer understanding of the factors influencing these perceptions is needed.

3.1.1 Teacher expectations and teacher perceptions

Firstly, it is important to separate teacher perceptions and teacher expectations. Teacher perceptions of a child will be formed by interactions with the child on an individual and direct level which would include perceptions of the child's prosocial tendencies, based on immediate and first-hand experience. In addition, teacher perceptions will be influenced by general features of a child such as the child's demographic group alongside knowledge and experience of the child and their family. As a result of the teacher perception of a child, teachers will then form expectations of the child's likelihood of success. These expectations are formed on teacher perceptions.

Teacher perceptions and resulting expectations, have often been interchangeable concepts in the research in the literature but attempts have been made to separate these terms. Separation of the terms has been around the timing with perceptions as being at a particular time and expectations being around the future (for instance Blanchard & Muller, 2015 or Hinnant, O'Brien, Ghazarian & Graesser 2009).

3.1.2 Teacher expectations and academic outcomes

Teacher expectations have been thought to have significant influence over outcomes in children's academic performance. For instance, the 'Pygmalion in the Classroom' study by Rosenthal and Jacobson (1968) found that teacher expectations of children influence learning success in the child. The study found that when teachers expected a pupil to do better in their

learning, then this expectation tended to be met. The results were found to be consistent over the school year in that if teacher expectations changed throughout the year, so too did the child's learning in literacy and numeracy tasks. This finding suggested that ability and attainment could be increased or decreased by educator beliefs around the child's ability. This link was presented as causal in that teachers could promote learning outcomes by boosting confidence in learners and that low expectations from teachers would actively lower performance. On the other hand, a teacher promoting a more negative view could then decrease the learner's confidence and subsequent performance. The causal link however could then place the learner's success or failure as a direct consequence of teacher expectations; such was its importance.

The conceptual relationship between domain-specific self-efficacy and more global self-belief remains contested within the literature. Drawing on her primary work on perceived competence, Harter presents self-belief as multidimensional, with children forming judgements of competence across specific domains alongside a more global sense of self-worth (Harter, 1982). From this perspective, repeated experiences of perceived competence within particular domains contribute incrementally to the development of broader self-belief over time. This position contrasts with accounts that place greater emphasis on the primacy of global self-belief. For example, Brown et al. (2001) argue that global self-worth acts as an evaluative framework through which children interpret their competence within specific domains. However, hierarchical models of self-concept allow for reciprocal influences between global and domain-specific self-beliefs, offering a more dynamic account of how these processes may interact across contexts (Shavelson et al., 1976; Marsh, 1990).

Wang & Hall (2018) proposed a simple model of teacher perceptions and student outcomes: teachers perceive students and change behaviour according to perceptions: pupils then

perceive these differences and change their perception both of themselves and of classmates, and finally the child's attainment level changes. This model suggests that teacher perceptions influence the child to change their produced work to fit with the perception. Previously Brophy (1983, p.631) based on his research, had compiled a list of 17 teacher behaviours through which teachers communicate negative perceptions of individual students to the student and to their classmates. The list contains behaviours such as providing differences in the forms of feedback, reinforcement of characteristics, differences in interactional tone, and nonverbal cues given to students perceived as high or low performers. Studies have also found strong evidence of behavioural differences among teachers especially concerning the amount and quality of feedback, praise, and assistance they give when students have problems with questions, tasks, and the teacher accessibility (for instance Rubie-Davies 2007; Rubie-Davies, Peterson, Sibley & Rosenthal, 2015; Urhahne, 2015; or Weinstein, 2002).

Attainment and learning expectations are not single factors for teachers when making assessments or forming perceptions or expectations of success. Aspects of learning include the significant impact of motivation and engagement levels which teachers use to form these perceptions. Observable behaviours that teachers use to categorise variance include effort, persistence, work ethic, attendance levels and participation in classroom discussion (Skinner, Kindermann, & Furrer, 2009; Fredricks, Blumenfeld & Paris 2004). Teachers have been found to offer sympathy, encouragement, and support if they perceived students' low ability as the reason for low achievement, whereas they reacted with more anger, criticism, negative feedback, and lower support if they perceived students' low engagement as the reason for low achievement (Georgiou, Christou, Stavrinides, & Panaoura, 2002; Wang & Hall, 2018).

3.1.3 Teacher expectations and children's approach to tasks

Teacher expectations have been found to be related to small interactions and features of a child's approach to learning in individual interactions between teacher and learner. A child's individual approach to learning has been found to be a significant factor in teachers' ability assessments. For instance, Jussim & Harber, (2005) found teachers increased accuracy in their predictions of a child's success based on factors other than cognitive ability. Cognitive capacities such as memory or problem solving had less influence on a teacher's accuracy in ability measures that the child's ability to focus. Teacher interactions with pupils allow teachers to note the pupil's cognitive processes for learning (e.g. memory, problem solving, language, perception) and attention level which affects teacher perceptions of motivation, behaviour and effort (Goldberg, Schwerter, Seidel et al., 2021). Teachers who perceive a pupil as engaged have been found more likely to offer additional support or adapt the learning opportunity (Skinner & Belmont.1993).

Other studies that highlight the significance of approaches to learning rather than cognition include Timmerman, & Van Der Werf (2016) which showed that teachers' achievement expectations are influenced by their perceptions of students' working habits. Lavrijsen &Verschueren (2020) also reported that teacher perceptions of students' cognitive abilities are shaped by their perceptions of students' classroom engagement.

The child's interest in tasks, the length of focus, along with perceptions of the child's confidence would be relied upon by teachers to make predictions about success and when utilised the predictions were more accurate. In respect of prosocial perceptions, these low-level assessments provide teachers with the capacity to identify these features, at first hand. The link between prosocial assessments and later life success may therefore be explained to some extent by teacher ability to assess finer details in a child's approach. This notion is

supported by teacher experience of children's prior performance linking with increased accuracy in predictions of academic success levels. De Boer, Bosker & Van Der Werf, 2010) measured teacher accuracy and found that accuracy increased based on teacher experience of direct working with a child and a greater understanding of the child's individual approach to learning.

There has also been some research around the accuracy of teacher expectations and pupils' performance attainments in secondary level education but less prolifically than with younger age groups, possibly due to the single teacher model of primary schools. However, Timmermans, Bosker, Doolaard & De Wolf (2012) found that for older children, teacher expectations were also linked to demographic features. Studies have also found that pupil character (including prosocial perceptions by teachers) influences teacher assessments (including Hoge, 1984 or Rubie-Davies, 2010) amongst other factors including work ethic, social status, and behaviour.

3.1.4 Teacher expectations and relationships

Hughes, Gleason & Zhang (2005) found however that these factors were less impactful on teacher expectations than the quality of the relationship between the teacher and pupil and that the warmth of the student-teacher relationship, affects teacher expectations than measured performance and background. A prosocial child may be more likely to experience this bond and then influence the accuracy of the link between prosociality and subsequent success levels. Social interactions have also been found to have a strong association with teacher expectations such as studies by Driessen (2006) or Kelly & Carbonaro (2012) who found that teacher perceptions of effort, frequency of doing homework, attentiveness, and disruptiveness in pupils would inform expectations and teacher expectations are based on the

significant factor of co-operation. Alvidrez & Weinstein (1999) found that additional factors influencing teacher expectations include students' perceived assertiveness and levels of co-operation from pupils. Co-operation and social skills have also been found to have significant influence on teacher expectations with measures such as a child's capacity to follow instructions and their capacity for social appropriacy (Rubie-Davies, 2010). In addition, interactions between teachers and pupils have been found to have a significant impact on the work ethic and approaches that pupils will develop (Hamre & Pianta, 2001). Teacher interactions in the classroom have been found to be led by perceptions of pupil competencies (Wang, Boyanton, Ross et al., 2018). This study measured the amount of feedback children are given, alongside the amount of praise given by the teacher to the pupil and found this is Rubie-Davies, Peterson, Sibley, & Rosenthal (2015) influenced by whether the teacher perception of a pupil is low or high performing.

Teachers have been found to be less supportive and provide less positive feedback when they perceive less cultural alignment with pupils. This leads to influences from teacher attitudes to learning outcomes for children who are culturally similar to the teacher (Rubie-Davies, 2007; Zhu, Urahne & Rubie-Davies, 2018). In addition, it has been shown that pupils are perceptive of the small differences in teacher approaches to particular pupils. Pupils have been found to perceive differences in non-verbal gesturing within 10 seconds of watching video clips of unknown pupils with unknown teachers (Babad 2005; Babad, Avni-Babad & Rosenthal, 2003). According to recent qualitative studies, pupils can perceive teacher expectations based on the level of confidence communicated by teachers about their capacity to carry out a task, the teaching style, relationship with teacher and the physical learning layout. (Johnston, Wildly & Shand, 2021). Teachers are perceived by children as having higher expectations for pupils when they offer praise, reinforce ideas of active learning, show care and allow autonomy. Conversely, the same study has been found that when

unfavourably compared students to their peers, pupils tended to disengage from learning. The study suggested that not only do teachers differ in how they behave towards their students depending on their perceptions, and students are aware of this differential treatment.

A number of studies have also been conducted on the relationship between teacher expectations and children's social-emotional skills. Teachers are more likely to expect academic success from disciplined, balanced, diligent and punctual students (Wellborn, Huebner & Hills, 2012;). The latter study found that teachers are generally not inclined to expect high academic results from a student who cannot control his emotions during a conflict or follow the teacher instructions and positive correlations were found between teacher expectations and the child's social behaviour in the classroom, student self-confidence, and indicators characterising the relationship between the student and the teacher (also see Timmermans, De Boer & Van Der Werf, 2016).

3.1.5 Teacher expectations of prosociality

Given that teacher perceptions play a significant part in attainment levels and academic outcomes, teacher perceptions of prosocial skills is, on the basis of the established research, likely to have an impact on the formation of teacher expectations which then influences how other children perceive a particular pupil in the classroom. Given the interpersonal relationship of classroom life and the differences that can result in day to day interactions with teachers, it would seem that teacher perceptions of prosociality, alongside the research suggesting teacher perceptions of prosociality is an area to explore to inform and isolate what it is that teachers see in prosocial children within a classroom context, and whether this measure, as with expectations of attainment can also be attributed to engagement, motivation or compliance.

This study set out to emphasise three aspects of prosociality within the research body and to identify how the research body could be utilised to support schools to support children. This chapter has identified that teacher perceptions (on which prosocial measures rely) are influenced by a range of factors. Although it is teacher perceptions and not prosociality that are being measured, this does not diminish the impact of prosocial perception and if anything, provides further support to argue that schools can use this research body to develop their assessment techniques. It cannot be overstated that interventions do not change prosociality and any measures of success are usually short term. Neither is there evidence that teacher perceptions are causally linked to lower outcomes. As such this study will move on to address questions of teacher perceptions for the purpose of considering how schools may understand that it is the predictive power that is, in research terms, that appears robust and potentially useful.

Teachers form perceptions and perceptions are formed by a range of factors including approach to task, relationship with the child and prosocial tendencies. Teacher expectations also take account of demographic factors that may be accurate reflections of the external world. Teacher predictions for academic outcomes are more accurate based on how much direct interaction is given with children and therefore accuracy of teacher predictions, based on teacher expectations and perceptions appears to provide a robust measure where teachers have spent time with children and taught them in direct interactions. For the purposes of this study, the power of teacher prediction as relating to future outcomes for prosociality and its related positive outcomes, is a relevant finding.

3.2 Situational factors in Prosociality

Theoretical frameworks of prosociality include both situational and dispositional factors that impact on perceptions of prosociality. This section will consider the contextual factors that may influence the child's perceived response.

Teacher expectations do not rely on individual perceptions in isolation. Demographic characteristics (race, gender and socio-economic factors) have been found to influence expectations of teachers. Rubie-Davies (2008) found that race and gender characteristics have been found to be significant in moderating teacher expectations. Teacher accuracy when assessing ability was found to be lower dependent on child's demographic features. Also, van den Bergh, (2010) found that teachers may over-rate or under-rate ability. Teacher bias and impact on their expectations has been measured in a number of larger scale studies (such as Weinstein, 1999 or McKown & Weinstein, 2008) proposing that teacher bias may be unconscious, and suggest teachers were correcting their own positive and negative attributions and ensuring that they adjusted expectations to counter these effects, leading to inaccuracies in assessment. Teachers, when making assessments of prosociality, can therefore be influenced by a level of bias (which may be unconscious) which will either raise or decrease their perception and scoring.

Jussim and Harber (2005), however found that teachers who made accurate predictions for demographic groups were making predictions that reflected the group's academic performance. Teachers were not reflecting a personal bias but rather reflecting the societal bias for some groups. Further studies (Glock & Krolak-Schwerdt, 2013; Speybroeck, Kuppens, Van Damme, et al., 2012; Tenenbaum & Ruck, 2007) found that that overall teachers will include demographic features in their assessments. Van den Berg had found in the 2010 study that teacher expectations were lowest for boys with low socio-economic

status. In measures of prosociality, given the reliance on teacher perceptions (for instance through rating scales and questionnaires) it is worth exploring whether these factors follow a similar path.

3.2.1 Prosociality and social class

Social class as a dependent variable has been studied within a number of disciplines including behaviours, attitudes, and life choices (for instance, Lubiani, Browne & Hooker, 2015; or Kraus, Piff, Mendoza-Dento, Rheinschmidt & Keltner, 2012). Evidence of increased prosociality and increased generosity in lower socio-economic groups has been found in studies where increased affluence negatively correlates with prosocial behaviour (Cheng & Kelter, 2010). Maslow's hierarchy of need (1943) suggests motivation is derived on a five-tier pyramid for humans to address (in order) physiological needs, safety, belonging, esteem and self-actualisation. With regards prosocial motivation, the capacity for reaching higher tiers can be fulfilled when basic provisions are in place. Less resourced people, in striving for practical resources, including staying food and safety may in having less capacity to move to the higher tiers. The relationships with others in trying to access resources in these lower tiers is arguably strengthened to access shared resources. When these needs are met the higher tier self-actualisation can take place with less dependence on others, as proposed by Kraus et al) in his study of community relationships in less affluent communities. Piff (2010) also found similar effect of low affluence and more generosity among participants in economic game play.

However, the studies can be critiques for their categorisation methods of affluence, and other studies have challenged the notion of objective affluence. Studies have shown that socio-economic status is subjective in that one's belief and relative. Where a subject chooses a

lower socio-economic for comparison, socio-economic level is perceived as higher than for those who compare themselves with higher socio-economic groups. (Crosby & Nyquist, 1972). Therefore, for prosocial behaviours, there is some evidence that social class may be a factor as studies have shown but is not a fixed category. Notwithstanding, there have been class differences found in prosocial studies. Prosocial behaviour has been found to increase or decrease based on the values of others in the identified group. Subjective deprivation measures have been found to be linked less to a larger 'outside' group than to specific individuals such as friends or classmates. Therefore, an average socio-economic child within an affluent area may consider themselves to be poorer than if placed in a group with low socio-economic status. Levels of prosociality as perceived by teachers also, as we have seen, be linked to the individual's teachers own values. As a result, statistical measures although appearing objective, will contain influencing factors that may affect results.

Socio-economics may in itself be less directly linked to prosociality and may be linked to features within the socio-economic group. A study that examined how individuals perceive fairness and unfairness in their treatment has been shown to significantly impact on prosocial action. For instance, an interesting study in adults that suggested that gambling (which increases in lower socio-economic groups) often requires an individual's belief in perceived unfairness for which they are hoping will be corrected through 'luck'. In a 2008 study, Callan, Ellard, Will Shead & Hodgins proposed that prosocial behaviour is reduced, and antisocial behaviour is increased when people feel a sense that they deserve more. Therefore, the relationship between social class and prosocial behaviours of helping, caring and sharing may relate more to the individuals' outlook rather than class division alone (e.g. Kraus 2012).

Studies that would challenge the link between reduced low prosociality and reduced affluence, have suggested that relative deprivation has been found to make individuals prioritise self-interest over others (Zhang, Lui & Tian, 2016). In this study, lower prosocial

behaviours were due to an increase in emotions such as anger and resentment. For instance Breivik, Olweus, Ben-Arieh et al. (2021) found that children from lower socio-economic groups have been found to conduct more bullying and less prosocial behaviours. Prosociality has also been found to be decreased in geographical zones depending on socio-economic factors. The poorer the area, then the lower the levels of prosocial action. The implication is that environmental harshness and prosociality are negatively correlated (Baumard & Chevallier, 2015). In a Romanian study (Popa, 2012), it was found that children who have experienced harsher environments are less prosocial towards a stranger than less harsh areas. In an adult study (Nettle, 2011) it was also found that prosociality, as measured through self-reports, was lower when participants were from less affluent backgrounds and higher with participants from more affluent areas. Relatedly, a further study found that income deprivation experienced in childhood was negatively linked to altruism in adulthood (Holland, Vries, Hermsen & Knippenberg, 2012). It is worth noting that this study required a self-report contrast with methods in childhood where third party are more often used. As such, this mix of reporting styles may provide some challenge to researchers when making such comparisons (see Fryer & Dinsmore, 2020, for an overview of self-reporting measures).

In childhood, low socio-economic status has been shown to be associated with increased aggressive problem behaviours (Dodge, Pettit & Bates, 1994) and lower prosociality (Malti, Averdijk, Ribeaud et al.,2013) and in longitudinal studies parents who experienced deprivation themselves and raised in 'harsher environments' are found to have children with higher reported anger and hostility in school (Hakulinen, Jokela, Hintsanen, 2013). However, studies have also reported increased aggression is linked with perceived socio-economic status irrespective of objective status: Greitemeyer & Sagiolou (2016) suggested that aggression may not be related to harsh environment in itself but relates to one's perception of

their environmental harshness. Where individuals perceive harshness, aggression was found to be increased along with lower levels of prosociality.

Within the classroom setting, the benefits on prosociality relationships have been found in that the higher the prosociality in a classroom, then the lower the levels of antisocial and externalising behaviours (Carlo, Mestre, McGinley et al, 2014, Pursell, Laursen, Rubin et al. 2008).

Kraus & Stephens (2012) argue that because the context of people with low socio-economic experience is characterized by social and environmental threats, they are more attuned to the social context as a potential way of getting support in times of danger. However, conversely children's empathy has been shown to be positively related to socio-economic status (Jolliffe & Farrington, 2006, Sánchez-Pérez, Fuentes, Jolliffe, & González-Salinas, 2014).

House, Silk, Henrich et al., (2013) found that children's prosocial behaviour increased with age across a number of cultures. This finding was supported Blake, Piovesan, Montinari et al., (2015) in a cross-cultural study to be linked to developmentally to a child's aversion to having less than other children.

The environmental and cultural impact on prosociality was also found in a study of children at aged 4, 6 and 9 years (Benenson, Pascoe & Radmore, 2007) and the study found that children who had been experiencing 'environmental harshness' were more prosocial at age 9 but there were no differences in the other ages.

The evidence for the impact of socio-economic group appears to be conflicted with some experimental studies showing significant positive impact of increased prosociality with lower socio-economic status and other studies finding that low socio-economic status is negatively correlated with prosocial behaviours. The explanation for this conflict may be related to the interpretation of socio-economic groups and other factors that may be associated with socio-

economic rather than a clear link. Socio-economic status may have an influence on prosocial behaviours as a result of differences in values, differences in attitudes, levels of satisfaction and expectations. For younger children the effect has been found to be limited but as children become older (and possibly more impacted upon by outside factors) there is a strong body of evidence pointing to increased hostility as shown in behavioural difficulties and levels of engagement. Prosociality as presented as a predictor of longer life outcomes appears to reflect in part the demographic outcomes of the group and bearing this in mind when considering the application of the prosocial evidence base is important.

3.2.2 Prosociality and Gender

When considering prosociality, a further factor that may influence teacher decision making is gender. Helping professions, including teaching have been shown to be undertaken by women who place more value on interactions and prosocial behaviours (Wood & Eagly 2012). It has also been found that woman and men act prosocially in line with their gender norms (Eagly, 2009) and women may take on more caring roles and men are less likely to take on caring roles and the idea is perpetuated that women are more caring and nurturing by disposition (Koenig & Eagly, 2014). However other studies have found that prosociality is not dispositional and can be affected by context, rather than a fixed feature in gender (Croft, Schmader, Beall & Schaller et al., 2020; Diekman & Clark, 2015; Van Den Akker, Van Assen, Van Vugt & Wicherts, 2020). Situational factors influencing prosociality include the finding that men tend to be more co-operative in same gender interactions whereas women are more co-operative in other gender interactions. Such gender role beliefs are assumed to explain gender differences in behaviour (Eagly & Wood, 2012).

With reference to prosociality, it is important to consider the broad definitions to understand these conflicting results. The definition of prosociality includes caring, helping and sharing.

However, there are gender differences in the likelihood of men and women's tendency to engage in these behaviours. For instance, it has been also been found that women are more likely to be supportive in their manner (Burleson & Kunkel, 2002; Eagly, Johannesen-Schmidt, Van Engen & Cooper, 2003) and may therefore score higher on measures of prosociality as caring. Men, on the other hand, may be more likely to engage in less emotional support but may demonstrate prosociality through helping, for example, protecting someone from harm (Rankin & Eagly; 2008). The breadth of the definition that interprets caring and helping as a single set of behaviours is therefore a potential source of challenge for researchers depending on the experimental design. In addition, female teachers may be more likely to value caring rather than men who may notice helping behaviours.

Teacher gender has also been found in the past to be a source of variation in ratings for social behaviour. Hopf & Hatzichristou (1999) found that female teachers tended to give more favourable ratings to 11-year-olds behaviour, social interactions and learning than male teachers. Spilt, Koomen, & Jak (2102) found that teachers report better relationships in their classrooms than male teachers and found that female teachers tend to report better relationships with their primary school students than male teachers. Furthermore Pas and Bradshaw (2014) found that male teachers rated fewer dysregulation problems in their classrooms than female teachers. Men were also found to report lower behaviour difficulties and women having better relationships has similarities to traditional gender roles as men potentially valuing control and women valuing positive interactions and relationships. Relationships between teacher and pupils have been found to lead to variations in reporting of behavioural problems in class and reinforces the notion of the classroom as being multilevel with children, teachers, climate and culture being as sources of variation (also Spilt et al, 2012), and the multidirectional aspect of the classroom is further exacerbated by findings that higher levels of aggressive behaviour and lower levels of prosociality from the class group

affect teacher ability to form supportive relationships with individuals irrespective of the individual's aggression level.

Boys have been found to be less likely to be reported as prosocial (Hay & Pawlby, 2003). In measures of empathy, girls are more likely to be rated higher than boys (Piff, 2010). Low empathy or low capacity perspective taking is more likely to be established in boys, and boys are more likely to be assessed as having autism than girls (Guinote, Cotzia, Sandhu & Siwa, 2015). Likewise, children who are perceived as having attachment issues also are found to have both lower levels of prosociality and lower empathy (Piff, Kraus, Côté et al., 2010). Further evidence of gender differences in prosocial behaviour has been found to have cultural differences as evidence in comparison studies between countries (e.g., Kumru, Carlo, Mestre & Samper, 2012) reinforcing the notion of prosociality as reflecting assigned social structures rather than universal and fixed roots.

Overall, gender and prosociality has a robust evidence base to suggest that boys are less likely to be prosocial than girls, but this evidence is not defined as being a trait in girls as evidence from other settings, variations in methods of testing, and value judgements from teachers may impact on context.

3.3 Dispositional factors in prosocial perception

Theoretical frameworks of prosociality include both situational and dispositional factors that impact on perceptions of prosociality. This section will consider prosociality as dispositional to further understand this impact.

3.3.1 Affective and Cognitive Empathy

Research studies around prosociality provides a strong link with prosociality and the development of empathy. Empathy is thought to influence the very young child's ability to

help, care and turn-take (Rheingold and Hay, 1980). Eisenberg (1992) found prosocial children in sharing and providing comfort to distressed others in children from as early as 18 months. Perspective taking has been long established as being evident in children from around 4 years old (Wimmer & Perner, 1983). The impact of empathy on relationship forming appears bi-directional in that adults and peers will have more inclination to interact with children who can both demonstrate empathic concern and take on another perspective.

Psychologists generally have been concerned with the role of emotion in positive social behaviour. Indeed, the idea that empathy is a major determinant of both prosocial and altruistic responses has been widely accepted among psychologists over decades (Thomas, 1981; Rushton, 1981; Staub, 1978; Miller, Eisenberg, Shell & Fabes, 1996) also suggested that empathic responding is a root of prosocial behaviour. A meta-analysis Yin & Wang, (2023) concluded following analysis of 62 peer-reviewed studies with 71,310 participants that the evidence supported empathy having a positive correlation with empathy.

There is broad agreement in the link between prosociality and empathy. However, empathy has a number of definitions and is important to analyse further. Researchers have often used overlapping definitions of empathy, altruism and prosocial behaviour. Furthermore, empathy can be understood as a cognitive skill by researchers (such as Deutsch & Madle, 1975) in that one is able to know that the other person's internal world exists and can comprehend the situation of others. Empathy has also been described as the capacity to identify with another's viewpoint and take on the perspective of the other. This perspective taking allows for role playing, which allows the individual to consider the needs and understand the emotional states of others (Ford, McClure & Haring-McClure, 1979; Shantz, 1975; Underwood & Moore, 1982).

Eisenberg, N., Fabes, R. A., Shepard et al., (1998) have shown that both empathy and sympathy as being the drivers of prosocial behaviour and in this way presents prosociality as being a trait derived from one's internal understanding, rather than placed upon a child by adults. Evidence for this trait has been found in research which has shown that prosociality increases with age, and that it is evident in a number of cultural contexts. Eisenberg's work in understanding prosociality began with an exploration of moral reasoning, and was found linked to empathic development, language and self-control. Dispositional differences in childhood are therefore to be expected given variations in children's development.

In more recent years a range of social and cognitive psychologists have considered the definition of empathy as being an emotional capacity rather than cognitive, (Batson & Powell 2003). Where empathy is understood as an emotional response further subsets in definitions are presented. Empathy can be understood as matching of emotion to another – implying empathy requires taking on the emotions and experiencing the emotions first hand as a mirrored effect. The motivation to help another is related to regulating one's own emotional state. This varies from empathy as being sympathy where one does not absorb and feel another's emotional states but relies on one's own experience and want to help on that basis without the emotional matching or mirroring. The motivation for prosocial behaviour (where empathy is defined as an emotional matching) is considered as a mechanism to relieve one's own emotional discomfort by relieving the emotional discomfort of others.

Eisenberg also suggested a distinction between sympathy and empathy with empathy being vicarious and involving emotional matching whereas sympathy referring to an unmatched but feeling of concern for another's welfare (Eisenberg & Miller 1996). This distinction again provides schools or intervention planners with a question to address – if empathy is a requirement for building prosociality then what kind of empathy is being sought?

As Hoffman (1982) noted, young children may lack the skills necessary to enact both types of empathically and sympathetically motivated behaviours. of course, it is difficult to establish the motivation behind prosocial acts with any certainty. A child may act prosocially to relieve their own anxiety whereby the altruistic child (defined as having a cost greater than the benefit) may not be motivated by self-interest. Therefore, feelings of sympathy and personal distress will result in different patterns of prosocial behaviour (Batson & Coke, 1981).

3.3.2 Emotional understanding and Prosociality

Emotional understanding relies less on mirroring of emotion and more on recognition of facial expressions, language for emotions and understanding appropriate emotions to situations. Within empirical research, emotional understanding impacts on cooperative play, sociability, and social competence. (e.g., Marcus, Telleen and Roke, 1979 and Marsh, Serafica, & Barenboim 1980)

More recently, research in the area, has continued to include debates around prosocial behaviour, and the component parts are considered as high status when friendship forming and maintenance (Spinrad, Eisenberg, Cumberland et al., 2006). Emotional understanding is considered as significant in the ability to improve social interactions in childhood when these capacities are developing.

Performance on emotional understanding tasks improves with age. For example, older preschoolers are better than younger preschoolers at naming and recognizing emotional expressions (Denham & Couchoud, 1990). In this study children could recognise expressions accurately, but receptive understanding develops earlier than expressive understanding, suggesting that young children can recognise features of emotion earlier than they have developed the language for the same features. The study found that on average, 2- and 3-

year-olds scored better (than chance) in labelling tasks. This age range is where Eisenberg has also found indicators of prosocial behaviours and may suggest that emotional understanding and facial expression recognition are of significance to the development of prosocial behaviour notwithstanding the debate over empathy as emotion or empathy as cognitive capacity.

3.3.3 Prosociality and Theory of Mind

Theory of mind is defined as the cognitive ability to understand one's own feelings and motivations and to understand that others have the same capacity. (Wellman, Cross, & Watson, 2001). This ability is required in an individual to be able to predict and understand the actions of others (Flavell, 2004).

A 1994 study (Perner, Ruffman & Leekam), concluded that theory of mind develops after age 4 and was unlikely to be present in younger children on the basis of an experiment eliciting the capacity of children to take a different perspective. After age 5 children mostly pass this test and understand that what they see and know is not universal and appear to understand that the different child has a different perspective. This tendency has also been shown to be consistent in meta-analysis considering studies from a range of cultural backgrounds (Wellman, Cross & Watson, 2001).

The principle of theory of mind can support understanding of other's emotions and understand that the emotion may differ from their own and accept that although they themselves may hold a view, that this view is not universally shared. A child with underdeveloped theory of mind would be unable to accept that alternative opinion, thinking possibly that it wrong rather than different. However, there are inconsistencies in the

research linking theory of mind and emotional understanding. There has also been research that suggests that understanding one's own thoughts and emotions facilitates an understanding of others' thoughts and emotion and, hence, the capacity for sympathy and empathy, resulting in motivation for prosocial behaviours and so promotes moral or prosocial choices to help others (Roberts & Strayer,1996).

Aspects of perspective (or role) taking have also been positively associated with empathy, sympathy, and/or prosocial behaviour (Batson & Powell, 2003). Other studies have also shown that sympathy correlates with prosocial behaviour more than empathic concern. (Eisenberg, 2006). Children who are aware of the feelings and desires of others are able to predict responses and their interactions and then able to adapt their behaviours to suit the situation or interaction. The higher the understanding of others' cognitive states supports interaction early on with their peers and adults, which are likely to contribute to longer term social and emotional well-being.

Rather than mirroring of emotion, children's cognitive capacity for understanding of others' emotion elicits understanding of others' difficulties which then foster empathy, sympathy and prosocial actions. Lalonde & Chandler (1995) found that increased performance on theory of mind tasks is linked to cooperative play in preschool children. There is also evidence of a correlation between verbal interaction including imaginative play. These forms of play likely facilitate cooperative behaviour.

Cassidy, Werner, Rourke et al. (2003), found preschoolers' combined emotional understanding and theory of mind as related to observable prosocial acts including helping caring and sharing. Deficits in empathy and perspective taking have been well documented in children with autism (Rutter, 1978) which is considered in clinical diagnoses as evidence of a weak or underdeveloped theory of mind ability. Children with autism are unlikely to

accept the views of others as being different resulting in perseveration and intolerance and reduced prosocial capacity. The theory of mind component in their thinking, irrespective of the capacity for memory has been found to have a significant impact on social interactions and status (Diesendruck & Ben-Eliyahu, 2006)

Although theory of mind is generally accepted as a capacity to understand the mental states of others as a way of predicting and explaining behaviour (for instance Flavell 2004) further research has provided evidence of links theory of mind and individual differences in social competencies. These social competencies are based on a complex set of interpersonal skills (Longobardi, Spataro, Saraulli, & Rossi-Arnaud, 2013; McCabe & Meller, 2004) involving an understanding of socially acceptable behaviours, emotional understanding, flexibility and problem-solving ability and language and communication skills. (Longobardi, Spataro, Frigerio & Rescorla, 2015). A distinction between having theory of mind capacity and using it in practical contexts (Caputi, 2012) is proposed as being linked to linguistic expression ability or mental state language. (Longobardi, Spataro, Saraulli & Rossi-Arnaud, 2013). Helping, caring, sharing and comforting have consistently been found to link with theory of mind (Bosacki & Astington, 1999) who found that theory of mind for pre-adolescents was linked to social competence and also language skills (in vocabulary measures).

However, understanding within child factors as being the trait or disposition which leads to prosociality is challenged by some other findings which return to a more contextual or situational framework. Discourse and/or explanations about emotions and mental states between parents (or peers) have been found to positively correlate with emotion understanding (Dunn, Brown & Beardsall, 1991; Grazzani & Ornaghi, 2012) and the frequency of cooperative and prosocial behaviours in children (Brown, 1996; Garner, Dunsmore & Southam-Gerrow, 2008). External influence and internal factors, it would seem are likely to interplay and the theoretical underpinnings are not mutually exclusive.

3.3.4 Prosociality and Genetics

Genetic effects in prosociality have been considered by researchers (see Knafo & Plomin (2006) for a full summary). Findings have extensively found a genetic contribution to prosociality using twin studies to consider the role of genetics. Heritability has been linked to cognition in a number of studies and although situational factors cannot be separated fully from the research studies, which will impact on the on-going prosocial tendency, the findings show that genetics contribute. Knafo's study emphasises that children's social interaction is bi-directional. The interactions between both parent and child suggests that children's tendency to prosociality is not based solely on the mother's influence. A previous study by Kochanska (1995) had also suggested that children's genes and their environment interplay in that external influence plays a significant role but that the child's temperament makes a dynamic contribution, rather than passive. The implication that a genetic factor would suggest stability in temperament is set aside by Knafo who suggested that genetic contribution was a starting point and that environmental factors would make a significant contribution. Genetics, the study concluded were likely to affect cognition and specifically referenced perspective taking as an example of such cognitive capacity.

3.4 Prosociality and classroom life

Within this section, consideration will be given to classroom factors that may impact on a child's prosocial behaviour and the perceptions by teachers of a child's prosocial behaviour. Social dynamics within the classroom might also be considered as being affected by both the child and groups' capacities and trait behaviours. However, contextual or situational factors

have also been found to have an impact on the day-to-day life in a classroom and consideration of these factors is important to better understanding how prosociality can provide useful implications for schools.

Children spend a significant amount of time in their young lives in the context of a classroom setting and individual experience will affect their academic attainments and outcomes, and it will also play a significant role in their social development and emotional well-being (Dunn, Mysan & Jones 2015). Classrooms with high levels of individual prosocial behaviour are likely to show group increases in prosocial actions over time (Laninga-Wijnen, Harakeh, Dijkstra, 2013). Linking these two notions together, prosocial behaviours in a class setting will impact on the relationships across the classroom and be a significant influence on the individual child's experience.

3.4.1 Classroom relationships

Empirical studies have shown that the physical classroom can affect classroom dynamics. Layout, for example and seating arrangements have been found to impact interpersonal relationships and there are several studies in particular countries that have paid some attention to this area. Significant and long-term studies from both China and the Netherlands have found robust evidence that ergonomics in seating plans will influence learning and also social status. Physical positioning of teachers has been found to have a significant influence on the perceptions of peers on peers described by Farmer (2011) as a strong influencing factor, ('the hand of the teacher'). It is proposed that children understand messages about other children through seating plans and this finding is particular to primary schools where

largely teachers decide on seating. Children's opportunities to interact can be limited or extended as a consequence of teacher seating (Allport, 1954) suggested who found that bringing people into contact with each other can decrease negative perceptions. Research has also been carried out on interpersonal relationships and physical proximity (Little, 1965) finding that familiarity due to closer proximity can result in more positive attitudes towards classmates. It has been argued that mere exposure to a person can create a positive attitude about that person (Zajonc, 2001, or Bornstein, 1989) and such closeness can be unconscious.

Adult studies have also shown that physical closeness to others can improve social interaction and positive perceptions (Back, Schmuckle & Egloff, 2008, McAndrew, 1993 or Mehrabian 1972. Students' relationships depend on immediate neighbours (van den Berg, 2012) who found in a large scale study that children who spent a period sitting with a peer that they had rated low on likeability scoring, rated then more highly when they spent a term with them in closer proximity. The same study found that bullying reports reduced.

Similarly, the interpersonal relationships within a classroom setting have been found to be influenced by teacher seating arrangements. Teachers report that they will consider the social needs alongside behavioural considerations when deciding where children will sit (Gest, Madill, Zadzora, 2014). However, studies have shown that although teachers report that socialisation is a significant factor, that behavioural issues are given higher status in practice. Teachers also have been found to make decisions about seating based on academic groupings in practice (Gest & Rodkin, 2011). The social concern has been found to be lowest in terms of consideration with behavioural considerations being the most significant factor. The discrepancy in teacher reports and actual classroom findings has been addressed by Gremmen, Van Den Berg, Segers et al (2016) who found that teachers, when questioned were answering with a prescribed response (giving the 'right' answer') or based on a self-belief that was at odds with observational studies. The given responses from teachers also in

studies often cite friendship promotion and co-operative learning to build a positive learning environment, although it is not reflected in objective measures. The design of tests has been found to be a factor particularly in studies where teachers are given a list of factors to consider rather than open questioning (see Kim, Burić, Kendeou, et al., 2020).

Children's position in a classroom has been found to be a relevant and consistent factor in their social status. A child placed in the middle of a classroom has been found to have increased social status in how they were perceived by classmates when compared with children on the edges of the room (van den Berg & Cillessen, 2015, Lintner & Šalamounová, 2021). An interesting study by Gest & Rodkin, 2011 found that when placed together, students reported increase in likeability from their neighbours, and although behaviour remained unchanged from seating position. Kim, Buric, Kendeou et al had found however, that likeability from other peers could reduce by a child sitting with a child with externalising behavioural difficulties. However, there are some studies that suggest that children with anti-social tendencies (measured by externalising behaviour) when sat alongside a prosocial peer, could increase their likeability overall within their class status and reduce incidents of challenging behaviour (van den Berg & Stoltz, 2018). A further study showed that seating students who actively disliked each other would increase their liking of each other (van den Berg, 2012).

A study by Babad and Ezer (1993) found that seating location in the class has an impact on peer perceptions which were found to have an impact on how children viewed to what extent the seater was liked by the teacher (those who sat close to the teacher), finding that children who sat further away were perceived as more disliked. This study found an association between seating location (front vs. back, centre vs. sides) and peer relations.

However, positive relationships between individuals may come at the cost of the larger classroom climate (Braun, Van Den Berg & Cillessen (2020); Hoekstra, Van Den Berg, M., Lansu et al., 2023) also found that teachers who want to increase social confidence, then placing the child away from the teacher (in comparison with a teacher moving a child for poor behaviour to sit closer) will yield a more successful result by placing the child with a prosocial classmate.

3.4.2 Seating position and learning

The link between classroom layout is also found to have an impact on learning, proposed as being linked to level of focus and opportunity for pupil interactions with teachers, (MacAulay, 2006). Studies have been undertaken to explore the impact of interpersonal distance between adjacent children on cognitive tasks in the classroom. It found that space and distance between classmates may impact on reading ability (Maxwell, 2003), and that the results showed a larger impact for girls than boys. The interpersonal distance has also been found to impact cognitive tasks such as problem solving and on empathy (Strayer and Roberts, 1997). This supported a theory proposed by Aiello 1974 suggesting stress related responses are experienced when one feels unsafe in our personal space and that the level of stress impacts on cognition because of the additional resources needed to counteract and regulate the stress (Helton, 2009).

Children with additional needs within a physical space, require teacher consideration to support their inclusion within the class community, both physically, behaviourally and socially. (Gremmen, Van Den Berg & Segers 2016). In addition to meeting the needs of the child with individual needs, the adjacent child may also be a consideration, particularly if there is a risk of externalising behaviour and there is evidence of negative impacts on

behaviour of adjacent children (Dishion & Patterson 1991: Dodge, Dishion, & Lansford, 2006; Snyder, Schrepferman, McEachern et al., 2008). Teachers may consider placing children in individual desks but be concerned about the impact on a child's social status (Choukas-Bradley & Prinstein, 2014). Children with challenging behaviour when sitting beside other children with challenging behaviour can result in significant increases in difficulties (also Snyder, Schrepferman, McEachern et al,). Teachers then often will place a child with behavioural difficulties with a child who can model positive interactions whilst being resistant to behavioural influence (Hektner, August & Realmuto, 2003; Vitaro, Brendgen & Pagani, 1999).

3.4.3 Social status and classroom seating

Success in social relationships will be linked to perceived likeability. However, likeability can be an indicator of social status, but there are other more significant factors. Social status or popularity and likeability are not interchangeable terms. The ability to influence a group and the amount of 'visibility' has been identified as an indicator of social status rather than likeability (Parkhust & Hopmeyer, 1998). Within the class context, seating position has been found to affect social status in a study if children are seated by teachers with a higher social status child (Back, Schmukle & Egloff, 2007).

Further, where children can choose their own seating , they are more likely to want to choose to sit with popular rather than likeable peers (Mayeux, 2011). Conversely Rose (2002) found children can choose to sit further away from a particular subgroup of high status children where children have higher social status through perceived aggression. Rose suggested these choices may be related to children avoiding conflict with a high social status child, and dependent on the perceived risk of a negative impact on their own reputation.

Studies of teacher selected seating have found teachers may consider placing children who have been bullied with higher status children who may offer some protection or enhance well-being in the bullied child (Hoekstra, Van Den Berg & Lansu, 2023).

Similarly, children perceived as teachers as prosocial in teacher selected seating have been found to be placed alongside some children with externalised or challenging (Van der Berg, 2018). The study found a protective and positive impact on both children. The child with difficulties has access to a role model and also can 'bask' in the adjacent 'light' of positive attention from the adjacent prosocial child through vicarious reinforcement, consistent with social learning theory (Bandura 1973). The prosocial child also benefits from receiving positive reinforcement from teachers about their positive influence on another.

Prosocial and socially competent children have been found to be more accepted by their peers. Aikins & Litwack (2011) found that children with externalised or challenging behaviour, when placed adjacent to a prosocial peer increase their prosocial behaviour. This increase was found to lead to reinforcing benefits of the acceptance of peers and higher social status. However other related studies have shown that children could increase aggression when sat beside an aggressive peer (Lavallee 2006) again suggesting that where there is aggression, then the impact may not be positive. In addition research that shows that children of prosocial parents will have concerns when their child is exposed to children who display aggression (Dodge, Dishion & Lansford 2006). However prosocial children in particular have been found to remain consistent and unaffected in terms of behaviour regardless of their proximity to challenging peers (Vitaro, Brendgen & Pagani 1999). The prosocial child's aggression level seems unaffected by close-by aggressive behaviour in peers is considered as related to their group acceptance and positive perceptions from peers (Mayeux, 2011).

Van Den Berg (2018) also found that although aggressive behaviour did not increase in prosocial children, when placed with low prosocial peers, that there were some negative impacts on their perceived likeability from peers in that children may associate proximity of a lower status child to lower status of neighbours.

A 2018 qualitative study from the Netherlands (Hoeskstra, van den Berg, Lansu et al.) identified factors in teacher decision making and separated teacher aims and teacher strategies in seating selection. Teacher selections of seating reflected goals of relationship benefits and whole group harmony using social status, interactional style and gender as part of the strategy to achieve the goal.

3.5 Can prosociality be taught?

Prosociality is defined by component parts that include prosocial intention, prosocial action, prosocial benefit and prosocial recipient. It is a low-cost action which can be seen in helping, caring and sharing behaviours. Prosociality is affected by both external and internal influences. External influences can range from the immediate vicinity to social demographics. Internal factors can be due to cognitive or emotional developmental processes. Biological and genetic factors may also impact on prosociality. Teachers can identify this tendency in young children from around age 8 and has been associated with improved outcomes in later life in a range of measures. For schools, it is important to examine the relationship between prosocial behaviour and positive outcomes and whether teaching prosocial behaviour will yield such benefits. In short, the link is established as an association. A causal link has not been established and therefore looking to change long term outcomes may have some appeal, but not evidence based at this time. However, schools may

consider that increasing prosociality in the classroom can yield more immediate benefits and therefore, this study will consider the evidence of success in school-based interventions.

3.5.1 Experimental studies

Researchers have sought to develop interventions to increase empathic response and prosociality links and as such have required measures of empathy. In a study of German children (Thiede, Stengelin, Seibold & Haun 2023) empathy measures for data collection included children providing a polite response to bad drawings. In this study the bad drawing and artist were adults. A further measure was for the child to make a clear effort to cheer up the bad artist. The study was based on a comparison following an intervention. The study found that empathy increased following an intervention in that area, but there was no transfer made to increased levels of prosocial behaviour towards peers outside of the experiment. Children, it was thought were responding differently to adults following intervention suggesting the intervention did not enhance prosociality or empathy but were based on a child's capacity to understand what adults expect.

Story telling has been used as an intervention for researchers determining whether empathy and prosociality are causally linked. Warneken & Orlins, (2015) found that prosocial responses were increased when children identified with a character in a study, understood as linking empathy and prosociality. Studies have linked capacity for polite lying (Jakubowska, Filip & Białecka-Pikul 2021) following interventions with storytelling. Measures following interventions have also considered challenging (or externalising) behaviour as being an indicator of intervention impact. Decety & Cowell, (2014) found that interventions to build emotional understanding reduces incidents of challenging behaviour. This particular study used previously validated interventions (The Incredible Years, Webster-Straitton, 2011) and

had previously demonstrated an increase in measures of affective empathy following its use. Other studies that also found story book interventions to increase empathic responses in younger preschool children included a similar study by Brazzelli, Grazzani & Pepe (2021). Given that researchers have suggested that empathy does not fully develop until later stages than preschool, it does pose the question as to whether these studies were measuring affective empathy or as with other studies, the child's capacity to deliver what they believe is expected of them.

Until around age 8 years it has been suggested (Blake, Piovesan, Montinari et al., 2015) that researchers can conceptualise around the child's development in perspective taking.

3.5.2 Real world interventions

A study of primary school children that measured their emotional well-being and made pre and post measures of happiness (Proulx, 2023). The study found that happiness levels were increased in individuals carrying out prosocial actions within practical community support interventions. In a further study of prosocial benefits well-being through questionnaires was reported increased sense of well-being following prosocial action both in short term interventions or routine over the course of the year such as visiting care homes (also Thiede et al). Although described as prosocial, some of the actions could be described as being high cost and may be more accurately defined as altruistic.

These nominally prosocial interventions rest on the assumption that school-aged children can develop greater prosocial tendencies by learning about or practicing prosocial behaviour in some form or another and that these experiences can foster greater well-being. The above studies found increased happiness levels reported and well-being but found no change in number of behavioural incidents and attainments. Again, the measure of self-reports, rather

than objective measures remain a potential difficulty in measuring validity, particularly following interventions with pre and post measures, where an expectation of change is possibly inferred by participants.

Although there is evidence of increased well-being following interventions, some studies have found that the active element of real-world access is the source of the impact rather than the prosocial intention. For instance, taking children out of class to support an old people's home is out of the ordinary, and an opportunity to make community links which can increase levels of happiness rather than the prosocial action itself. Programmes that seek to consider the benefits of prosociality within a school setting have also provided some insight. Gratitude programmes as we will outline, provide one such example.

3.5.3 Small scale interventions

There have been a number of small-scale studies from schools that support the idea that social communication can be taught but in small numbers. For instance Gena, Krantz, McClannahan, and Poulson (1996) or Harris (1990) found that particular techniques when working with children with autism would increase empathy in small group learning where they were modelled appropriate responses including showing sympathy and laughing about silly things. In addition, the skills were transferred to other settings. A later study et Lundeman (2007) used video modelling, prompting, and reinforcement to teach children with autism to emit prosocial responses. Further small scale and targeted studies that suggest that attempts to increase prosociality as an intervention can provide support to children to overcome difficult experiences including being bullied (Griese & Buhs 2014), and in approaches to increase resilience .

These approaches to teaching children with autism, suggest that modelling and prompting in social skills learning also can have relevance to teaching autistic children to be prosocial. However, there are many factors unaddressed in the summary and a range of factors may have influenced the outcome, including support from home, level of difficulty, cognitive understanding and language skill. However, schools often follow this model of small-scale intervention to target particular children with particular social difficulties and 'friendship groups and nurturing groups follow these principles routinely.

3.5.4 Large scale interventions

Gratitude has been found as an effective tool in increasing well-being in children in a range of studies although the evidence has been found to be not consistently demonstrated. A study by Froh, Fives, Fuller et al., (2007) it was found that positive benefits of gratitude can impact significantly on a range of measures, including an increase in prosocial actions. Children in schools have been found to have increased prosociality with specific gratitude intervention programmes where children are required daily to consider who has provided specific help for them on that day. The implications of this research have been particularly interesting for schools since a review of the evidence was promoted to US school psychologists with a recommendation that practitioners and students take part and access the benefit from gratitude interventions. The interventions were low cost in terms of time and practical resources and both schools and school psychologists largely embraced the concept. However further reviews suggested that the correlations between gratitude and interventions were less understood. According to Wood (2014), literature on gratitude is often plagued by 'too much enthusiasm and too little scepticism' resulting in overly optimistic interpretations of research findings that fail to highlight empirical ambiguities. For example, despite being lauded and

advocated in popular-press books as a well-established, science-based practice (Froh & Bono, 2014), the efficacy of gratitude-based interventions for youth seems unclear in the peer-reviewed literature. These interventions took place in a context where gratitude interventions should occur 'as soon as possible' (Bono 2014, Froh 2007,) and that gratitude interventions could lead to not only to strengthening of school communities but also strengthened wider communities in the future, changing school ethos, help fulfil youthful potential and decrease staff absence had in empirical research not been established.

A meta-analysis (Renshaw & Steeves 2016) later found that reports of the impact of gratitude had been overstated. Their findings s, based on 44 published studies up to and including September 2014, suggested that relation between gratitude and prosocial behaviour was 'notably small (r^2 =.07) and was based entirely on self-reported prosocial behaviours' in the aforementioned studies. Renshaw & Steeves reported that although correlation have been found between registering gratitude as a general approach with well-being and prosocial behaviour but there is no evidence that gratitude can be taught through gratitude-based interventions, and that gratitude exercises were found to have no significant effect. Neither has any link been found between gratitude in academic attainments or reduction in externalising behaviours. Although gratitude-based interventions may be helpful for some particular adolescent programmes, within a classroom context, generalisations for whole class groups were later removed as a recommendation for educators given the limited time and resources for teachers in schools.

Evidence of successful intervention in prosociality has however been found through a cultural change in the school climate. A large-scale longitudinal study (Mooij, 1999 and 2000) has already established a method of increasing prosociality in schools based on attitudinal change in staff. Prosociality was found to have increased following an intervention involving staff and pupil co-operative relationships. School practices were changed to incorporate

programmes of 'social behaviour' and cognitive learning behaviours. Within these programmes information was given to teachers about the social and cognitive characteristics of learning before the establishment of working groups to consider the relevance of these characteristics of learning to their particular students. Teachers were then asked to establish class rules along with students and to ensure that the rules were positive to increase pupils' responsibility for and control of their 'own' rules. The intervention was found to increase relationship quality and increase prosocial acts. However, there were associated problems with a number of staff feeling unhappy about the new changes in ethos. The experiment was found overall to have some difficulties for teachers and for resourcing issues and the cultural change required, the intervention was not repeated.

3.5.5 Intervention implementation

When considering implementation of interventions, the model of behavioural intention (Azjen, 1985) may provide some insights into these contrasting studies and their outcomes. In this model, behavioural intention is based on three component parts which may help to explain the outcomes in each.

Firstly, this model suggests that change occurs if the change complies with societal norms. Within the gratitude study, the primary school norm of encouraging children to acknowledge their carers has been long established and routine, whether through prayers or through circle time discussion. Therefore, it does comply with these norms. However, within the whole school intervention, the approach was novel and moved away from the existing routines. It did not comply with the norms.

Secondly, the model suggests that attitudes by stakeholders would impact on the likely success of a new programme. Attitudes by staff in the gratitude study were consistent and the notion of gratitude was embraced by staff. In the latter project, some staff were unhappy with the new pedagogical framework and without consensus in attitudes, the programme became unviable.

Thirdly, the gratitude study was promoted as being a changeable construct in that the activities would result in change in the children's prosocial action and reduce behavioural difficulties. As the expected change did not take place the enthusiasm diminished. In the latter study, the change did take place but at a high cost. Considering these factors, however, may allow for schools and local authorities to be aware of the likelihood of success being connected as outlined and this model may be particularly useful prior to interventions in general.

Overall school-based interventions have not provided compelling evidence that large scale interventions will make an impact on prosociality. Small scale interventions appear to have more success in developing social interaction skills. Interventions within a real-world setting require staff to embrace the change and for the change to be low cost. Where these are not present, interventions can fail at implementation. Conversely schools can embrace low-cost change interventions enthusiastically and will be maintained or stopped related to a school's direct experience of failure or success and the robustness of the evidence bases to some extent seem unrelated.

3.5.6 Overview

Prosocial ratings have been found to correlate positively with affluence (for instance Piff, Kraus, Cote et al., 2010; Kraus, Piff, Mendoza-Denton et al., 2012) and negatively with deprivation. This study will consider these factors and explore whether these factors are

found to be evident in classes with relatively closeness in deprivation levels (Levels 2 and Levels 4 on the SIMD measure of 1-5 categories where 1 is low and 10 is high). In order to further explore prosociality, a mixed, multi-dimensional study was conducted to establish teacher perceptions of prosocial behaviours, the link with prosocial perception and empathy and the impact of these perceptions on classroom decision making as described in Chapter 4. Based on the definition established within the scoping review (see Chapter 2) presented by earlier researchers (such as Batson and Powell, 1988; Eisenberg, 1992; Carlo and Randall 2002; Caprara and Steca, 2005) prosociality is categorised by components of prosocial behaviour, prosocial intent and prosocial benefits. For the purpose of this study, these components were explored in the classroom setting, and, consistent with other researchers in the area of prosociality in childhood (Volodina, 2023; Tintori, Ciancimino, Palomba et al., 2023; Longobardi, Settanni, Lin, & Fabris 2021; Peplak Bobba, Hasegawa et al., 2023) this study uses teacher perceptions as its measure of prosociality in primary school age children.

Chapter 4: Methodology

4.1.1 Aims and rationale

The aims of the study were to consider the formation and impact of prosocial perceptions by teachers on the classroom setting. Prosociality was found in the scoping review (Chapter 2) to be assessed in school age children using teacher ratings. Therefore, this study has sought to emphasise that it is teacher perception of prosociality that is associated with longer term increased likelihood of positive outcomes (as outlined in Chapters 1 and 3). Further this study sought to emphasise that prosociality is not objective behaviours but describes an interaction. This study sought to consider the nature and implications of teacher perceptions of those interactions.

4.1.2 Areas of Study

The study set out to address a number of questions relating to prosociality within the classroom setting. The questions are given below within a brief context:

1 Are there associations between both gender and socio-economic factors and teachers' ratings of prosocial behaviour?

2 Demographic factors have been shown to result in variations in teacher ratings of prosociality (see Chapter 3, Section 2 for summary).

3 On which behaviours do teachers base their ratings of prosociality? Behaviours associated with prosociality include helping, caring and sharing (see Scoping Review, Chapter 2). Prior studies have demonstrated methodological issues which suggest that helping and volunteering behaviours have a lower status as a prosocial signal than caring behaviours as caring behaviours have been found to be perceived as

demonstrating empathy. Therefore, this study compared correlations of sub-item scoring and proposed that caring behaviours will correlate higher with overall prosocial teacher rating than other sub-scale items of helping and volunteering.

4 What impact does teacher perception of prosociality have on classroom dynamics and teacher decision making in seating? Seating positions in class can influence children's social status, reputation and relationships (as explored in Chapter 3, Section 4). This study therefore sought to establish whether, teacher perception of prosociality affect seating decisions.

5 What do class teachers perceive to be the basis or causes of low prosocial behaviour in children and what attributes do teachers make about prosocial abilities? Teachers' ratings of prosociality, (as outlined in Chapter 3 Section 1) are formed both on behaviours and on interpretation of such behaviours. These subjective judgements were explored through a framework of attribution theory to consider what teachers think about the basis of prosocial behaviour, and specifically the locus of control for this behaviour as dispositional or situational.

6 What factors do teachers consider when teaching prosocial skills? A large body of research (see Chapter 3) suggests that empathy and prosociality are linked and empathy is defined as having a cognitive basis. In order to further identify teacher attributions of controllability and capacity for change within children; teachers were asked to propose how they would teach prosocial behaviour in class and their narrative responses were categorised to establish the implications of the teaching methods.

7 How do class teachers report their perceptions of prosociality into classroom decision-making in respect of seating? Teacher decision making about seating in class was further explored through teacher narratives of their decision-making rationale when placing children with low prosocial ratings and their immediate neighbours in class.

The narrative was explored through attributed characteristics and controllability using attribution theoretical frameworks.

8 What are teacher perceptions of the benefits of prosociality? The impact of prosociality across the wider classroom, based on teacher views and these views were considered in a Personal Construct Theory framework to explore the perceived benefits of prosociality. Personal Construct Theory allows a framework to reveal the reflections, beliefs and values of participants in a particular format and in this case, to explore teachers' constructs around prosociality in children.

Quantitative data was used to address Questions 1-3 and qualitative data through semi-structured interviews was used to address Questions 4-7 as outlined in Sections 5 and 6 of this chapter.

4.1.3 Researcher Positionality and Reflexivity

The position of the researcher is considered to be significant within this study, particularly given the focus on teacher perceptions and judgements about children's prosocial behaviour. This research does not assume a neutral or detached position; rather, it recognises that my experiences, professional role and theoretical orientation have shaped both the focus of the study and how the data have been interpreted.

As an educational psychologist working alongside schools, my professional practice is informed by a commitment to inclusion and to attending to the perspectives of children and families who may experience marginalisation within educational systems. This has contributed to my interest in prosocial behaviour, particularly in relation to those children who may be positioned as low in prosociality. It has also shaped my sensitivity to the

contextual and relational factors that appear to influence how children are understood within school environments.

My own experiences have also contributed to a sense of occupying an "outsider" position across social, cultural and professional contexts. This has informed my awareness of how children and families may similarly be positioned within education systems, particularly where behaviour is interpreted negatively. As Thomson and Gunter (2011) suggest, researcher identity is not fixed, but shifts between insider and outsider positions depending on context. Within this study, my dual role as both practitioner and researcher has required ongoing attention to these shifting positions.

This positionality brings both strengths and potential limitations. It may support an attuned and empathic engagement with participants and with the children described; however, it also carries a risk of over-identification. In particular, there is a possibility that I may be more inclined to interpret children perceived as low in prosocial behaviour as misunderstood or marginalised. This required careful reflexive attention throughout the research process to ensure that interpretations remained grounded in the data rather than shaped by prior assumptions.

Reflexivity within this study has therefore been approached not as an autobiographical exercise, but as an ongoing methodological process through which assumptions are examined and made visible (Holmes, 2020). The Johari Window (Luft & Ingham, 1955) provided a useful heuristic for considering known, hidden and blind aspects of self that may influence interpretation. Blind spots were addressed through supervision, peer discussion and engagement with theory, supporting a process through which assumptions about what constitutes normative or desirable prosocial behaviour could be questioned.

I also acknowledge the relevance of gender within my positionality, particularly given the prominence of gendered expectations within both the findings and the wider literature on prosocial behaviour. Reflective discussion and supervision supported consideration of how concepts such as care, empathy and responsibility may be shaped by personal experience as well as broader social expectations.

Within my professional role, reflexivity is a familiar and necessary aspect of practice. Within the research process, however, it has required particular attention to ensure that interpretations remained analytically grounded rather than shaped by personal identification. The acknowledgement that aspects of interpretation remain partial, and that not all influences are immediately visible, aligns with the Critical Realist orientation adopted within this study.

4.1.4 Educational Psychology and Critical Realism

Critical Realism was selected as the underpinning framework for this study as it offers a way of holding together different forms of knowledge that are often drawn upon within Educational Psychology. This study seeks not only to describe teacher perceptions of prosocial behaviour, but also to consider the underlying mechanisms and contextual influences that may shape those perceptions.

Critical Realism assumes that aspects of reality exist independently of our understanding of them, while recognising that knowledge of these processes is always mediated through social and contextual interpretation (Bhaskar, 1978). This is particularly relevant within the present study, where teacher ratings of prosocial behaviour are understood neither as objective truths nor as purely subjective accounts, but as professional judgements formed within particular relational and institutional contexts.

Following Bhaskar (1978), a Critical Realist approach involves moving beyond description of observable data towards consideration of generative mechanisms that may not be directly visible, but which help to account for patterns in empirical findings. Within this study, this involves looking beyond teacher ratings themselves to consider the broader social, cultural and relational processes that may influence how such judgements are formed.

Archer's (1995) work further supports this perspective by offering a way of understanding the relationship between individual agency and social structure. Teacher perceptions in this study are therefore considered as emerging through the interaction between personal experience and wider educational contexts, rather than being reducible to either individual opinion or structural influence alone.

Critical Realism also provides a rationale for the use of a mixed methods approach. Quantitative methods allow for the identification of patterns within teacher ratings of prosocial behaviour, while qualitative methods support exploration of how these ratings are understood and enacted in practice. In this way, both description and explanation are drawn upon, reflecting the Critical Realist position that different forms of data can contribute to a fuller understanding of complex social phenomena (Robson, 2002).

Through this approach, the study seeks to consider how observable patterns in teacher perceptions may be connected to less visible dispositional, relational and contextual factors, without reducing findings to simple causal explanations or to purely subjective interpretation.

4.1.5 The Empirical, the Actual and the Real

Within this study, Critical Realism provides a framework for considering different levels of analysis. Teacher ratings of prosocial behaviour can be understood at the empirical level, representing observable data. Exploration of factors that may influence these ratings, such as

beliefs about empathy and classroom practice, operates at the level of the actual. Consideration of deeper mechanisms, including dispositional tendencies, cultural expectations and contextual pressures, is situated at the level of the real (Bhaskar, 1978).

This framework supports the integration of different theoretical perspectives. Eisenberg's dispositional theory offers insight into empathy and perspective taking, while Bandura's work highlights the influence of environmental and situational factors. A Critical Realist position allows these to be considered together, recognising that multiple influences may be operating simultaneously, even where they are not directly observable.

4.1.3 The Mixed Methods Approach

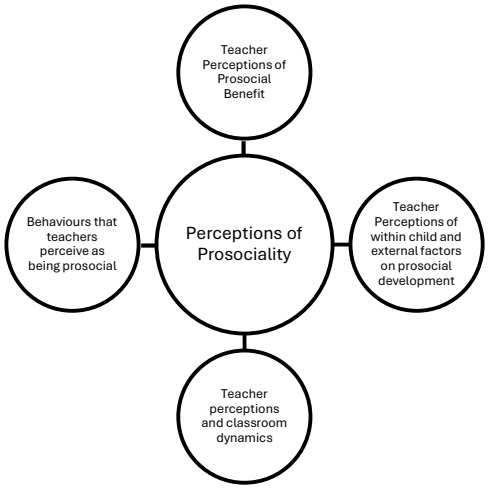
Prosociality was studied using mixed methods research (Downward and Mearman, 2007). This approach allowed consideration of extensive and intensive qualities of prosociality with an aim to 'reveal different features of the same layered reality. The combination of quantitative and qualitative methods allowed consideration of teacher perceptions moving from the macro level of teacher perceptions as a wider group to the micro levels of the basis of teacher perceptions Quantitative methods were applied to consider teacher ratings of children's prosociality and consideration of the wider demographic influences on these ratings. In addition, a study of teacher ratings of children's specific behaviours that influence these ratings was undertaken, following on from the behaviours identified within the scoping review (see Chapter 2). Finally, quantitative methods were used to consider implications for classroom social groupings through teachers' choices in children's seating.

Qualitative measures allowed consideration of teacher and their perceptions of the roots of low prosociality in children. Teacher rationale for seating position of children with low prosocial ratings was also considered. An exploration of teacher perceptions of the methods for promoting prosociality was considered to further identify the assumptions made by teachers. Teacher assumptions and constructs were also identified in terms of the benefits of prosociality within the group function of the classroom.

The combination of methods, informed by Critical Realism allowed therefore both an exploration and an explanation of the empirical findings and allowed consideration of associations between the two. This study aimed to provide insight and clarity into prosociality, and the seven studies were not distinct.

The component elements of prosociality identified in the scoping review included prosocial intention, prosocial action, prosocial recipient and prosocial benefit (as Figure 1 within the Scoping Review presented in Chapter 2.1.3). The distinction of *perceived* prosociality is the basis for this study and therefore those component parts were explored as Teacher perceptions as shown below in Figure 2.

Figure 2: Components of Teacher Perceptions of Prosociality



4.2 Measures - Data Set 1

4.2.1 Deprivation Index

Deprivation was measured through the Scottish Government measures of Scottish Index for Multiple Deprivation (SIMD) (2020). The measure is collective of the whole school catchment area, which comprises seven indicators to identify levels of deprivation on a scale of 1-5 (where 1 has highest deprivation and 5 has lowest deprivation) using a range of indicators. In Scotland this measure is based on income, employment, education, health, access to services, crime and housing. Other measures include level of free school meals were discounted because although used in long term data collection, formulas for resource distribution in Scotland are based on their SIMD category. Three schools were in SIMD data SIMD at level 2 and three schools at level 4 These data were accessed from school records and is attributed to the school catchment area as a mean score. The data were not collected specifically for this study and provided by headteacher informed consent. The measure provides, within a school setting a collective representation of a class group. This

collective measure avoids individual identification of deprivation, and also replicates other studies of socio-economics (such as Zhang, Liu & Tian, 2016; Baumard & Chevallier, 2015; Popa & Bochis, 2012; Holland, Vries, Hermsen & Knippenberg 2012; Dodge, Dishion & Lansford, 1994; Malti, Averdijk, Ribeaud et al., 2013; Hakulinen, Jokela, Hintsanen et al., 2013) which used collective deprivation measures. However, acknowledgement is given to the issue that collective socio-economic groupings can result in limitations in that small pockets of children with higher or lower socio-economic status are included and not identified. Within Scottish schools this collective data is used to determine a mechanism of resource allocation for lower socio-economic groups (for instance in 'Wider Access' programmes to increase access to higher education for school leavers) and the lack of rigour on individual households is noted but remains in place. On the basis of these reasons, for the purposes of this study this collective measure was used but is acknowledged as a limitation (see Chapter 6.1.4.).

Aberdeenshire is the second largest local authority in geographic terms and contains both rural and urban areas. Aberdeenshire has relatively low diversity but has some towns with relatively higher levels of diversity, particularly people from Eastern Europe in its urban areas including Peterhead where half of the participating schools in this study were located. Within Aberdeenshire there are 340 data zones for the Scottish Index of Multiple Deprivation (SIMD), of which 23 are found in the Peterhead area. Of these, nine are placed within the lowest 5% and two within the lowest three data zones. SIMD levels for the schools included in the study were Level 2 and Level 4.

4.2.2 Goodman's Strengths and Difficulties Questionnaire Prosocial Profile

Teacher perceptions were gathered initially through Goodman's (1997) Strengths and Difficulties Questionnaire (SDQ) which has been found to have validity and reliability across numerous studies as shown in Chapter 3. This measure is a widely used measure used to profile children's skills in schools. The SDQ (Teacher Report) (1997) was selected following the scoping review analysis that this measure in a school context was found to be used most frequently for the sampled group. The measure is brief (comprising five items) and allows for teachers to complete for individual children, in relatively large numbers and is considered both practical, reliable and valid by researchers in the area (for instance Tintori, Ciancimino, Palomba et al, 2015; Longobardi, Spataro & Rossi-Arnaud, 2016; Cuyvers, Vervoort & Bosmans 2020). Further the SDQ has been found to be a reliable and valid measure of prosociality (Muris, Meesters, Eijkelenboom & Vincken, 2003; Niclasen, Skovgaard, Andersen et al., 2013; Kersten, Czuba, McPherson et al., 2016; Español-Martín, Pagerols, Prat et al., 2021).

The SDQ's psychometric properties were considered for validity and reliability. Goodman's 2001 study verified the reliability and validity of the SDQ using cross-scale correlations, cross-participant correlations, internal reliability, re-test stability, and validity when compared to other measures. Using Cronbach's Alpha Goodman (2001) demonstrated internal consistency for SDQ scores for overall SDQ scores from parents, teachers and pupils within the age category 5-15 years. Across the full five scales Goodman found reliability coefficients as generally satisfactory (a= 0.73) the prosocial scale was found to have a higher reliability correlation for teachers (Cronbach's a=0.84). The SDQ was therefore considered to be a valid and reliable measure of prosociality.

The SDQ is based on teacher perception and requires completing a Likert scale for particular subscale of skills. The Prosocial scale is one of five measures used within the SDQ which has

routinely been used in measures of prosociality (see Appendix 6). The questions involve ticking a box of either ‘completely true, sometimes true or not true) in measures that are thought to measure voluntary caring, sharing and helping. The adapted measure commonly used in research studies reduces the SDQ (see Appendix 7) to one prosocial measure as shown in Appendix 8 and this study followed this approach and use the SDQ to identify prosociality in children by teacher responses to the five questions. The SDQ administration guidelines suggest that the results of the test provided scores from 1-10 on a prosociality scale. Goodman’s composite prosocial scoring, places children in one of three categorises of prosociality: normal (scores 6-10), borderline (score 5) anti-social (scores 0-4). Goodman Ford, Corbin et al (European Child & Adolescent Psychiatry, 2004-01, Vol.13 (S2), p.25-31, 2004, p. 29) found that categories were useful for risk assessment for mental health disorders but acknowledged there can be some false positives or false negatives and that a subjective further question about the respondent’s view of whether a child has emotional difficulties, and in particular to what extent these difficulties were resulting in distress for the child might be helpful. For the purposes of our study, these cut-offs were maintained and the three categories of ‘normal’ ‘borderline’ and ‘abnormal’ were maintained as can be found in in the scoping review in Chapter 2. However, these categories terms have been adapted to ‘prosocial’, ‘borderline prosocial’ and ‘low prosocial’. These terms are used based on the SDQ’s categorisation vocabulary with an amendment in vocabulary from ‘anti-social’ to ‘low prosocial ratings’ due to a somewhat negative connotation. This study does, by its design, use these ratings for empirical data collection which could be understood as a deficit model which has been, in the educational psychology profession, as limiting or problematic . However, as emphasised in this chapter (Section 4.1.5) the measure is solely based on teacher perception and does not claim these ratings as a measure of a fixed notion of prosocial intention. This study is undertaken with the understanding that there is a requirement for

deficit language of 'low prosocial ratings' but it cannot be overstated that the description is of ratings rather than participant children themselves.

The Goodman's SDQ Prosocial Profile is widely used studies (for instance, Longobardi 2016) as found in included studies from the scoping review in Chapter 2).

Alternative measures are provided in were considered and discounted as detailed in Appendix 2.

Teachers were the primary participants and SDQ is a teacher-rated tool, which for this study allowed a measure of teacher perceptions but was not understood as an objective child behaviour.

The SDQ contains five profiles to assess children's behaviour and approach through twenty-five questions overall. The rationale for the use of the SDQ Teachers Prosocial Profile was threefold:

1 The SDQ Prosocial Profile is a brief measure.
2 The definition of prosocial behaviour as helping, caring and sharing behaviours as set out in Chapter 2, Scoping Review), is reflected in the SDQ Prosocial Profile sub-items.
3 A number of pre-existing factor analyses of the overall SDQ test have been undertaken and found it to be reliable and valid (as outlined in Measures, Section 3 within this chapter).

Ethical approval for using the SDQ Prosocial Profile in schools was sought from Aberdeenshire Council and University of Strathclyde as outline in this Chapter Section 4).

Pre-existing research studies demonstrating reliability were accepted and no requirement for a pilot study was found. No missing data was found in the returned questionnaires due to the returning questionnaires only being for children who met the criteria for inclusion. As a result, class sizes overall were not reliably measurable from the data and a limitation of this study with reference to any class size data was acknowledged.

Teachers were also invited to provide one classroom layout showing children's seating with neighbours identified, showing registration number. Teachers were encouraged to consider this exercise about the closest neighbour rather than an accurate classroom plan.

4.2.3 Seating Plan

A seating plan (see Appendix 9) to show the child's closest neighbour was also sought through a single seating plan map provided by the class teacher in classes where teacher seating selection was used. The closest neighbour was defined as the child who was physically closest to the child in their typical seating position in class. In the latter, there are findings that suggest proximate neighbours in class impact on social status and relationships and for this purpose, the seating plan allowed exploration of where children within three categories of prosocial, borderline and children with low prosocial ratings are positioned. Hong & Lee's (2017) study of influence of peer on academics was considered for its relevance. In the study, which was conducted on college students, pairs of students were identified on a seating chart based on rows and columns. These students were identified as pairs based on proximity and that the first neighbour was categorised as tier 1. The study allowed that for each student there would be others in the vicinity but categorised them and their resulting influence as tier two. Distance has also been found to play a part in prior

studies of seating (Jaffe, Trajtenberg, & Henderson 1993; Keller, 2004).and for this study, this measure was considered appropriate.

4.3 Measures Data Set 2

4.3.1 Qualitative Interview Approach

Qualitative interviews provide an intensive approach to exploring the perceptions that teachers have of children, and for this study, this approach was used with regards to how children are perceived in terms of prosocial action. The methods for this used attributional analysis followed on from researchers (such Stratton, 1986 and 2003 or Rubin & Rubin, 2005) in coding responses to semi-structured questions. Responses were analysed comprehensively using a numerical coding which was then statistically analysed. This method has also been used in complex systems such as families to identify core attitudes and underlying emotions. Where codes were used in three studies (Question 4, 5 and 6) deductive codes were applied.

4.3.2 The Development of the Approach

Attribution theory provides a methodology based on Heider's earlier methods (1957) and remains in studies such as which was developed to understand what motivates people and how they operate on their beliefs. It remains a way of understanding and predicting behaviour and allows a more nuanced and unstructured approach than questionnaires about the self. A system (the Leeds Attributional Coding System (Stratton, Heard, Hanks et al., 1986; Stratton, 2003; Weiner (2010). Weiner (2010) also noted the stability dimension of attribution as a predictor of future behaviour. A recent meta-analysis (Ji, Tao & Wang 2025) systematically analysed 133 studies and found that these techniques although may require modernisation (for digital

communication) remains a validated procedure and continues to be used in social and clinical psychology for interpersonal measures at an interpersonal level. In this study it was used as an appropriate method of coding statements of teacher descriptions of children. The established and validated procedure was followed. The LACS has demonstrated good levels of reliability and validity in research studies including analysis of family therapy material (Munton & Antaki, 1988; Stratton, Heard & Hanks 1986; Silvester, 1989; Brewin, 1992) and group discussions for market research (Stratton, 1991). Causal statements, defined as statements were extracted from transcripts. Each of these attributions is then coded on causal dimensions; Stable-Unstable, Internal-External, Personal-Universal, and Controllable-Uncontrollable allowing for quantification of qualitative material. The reliability was assessed and checked using the same researcher with repeat measures (with a minimum return gap of two weeks).

The information being sought concerned the perceptions of teachers to allow for coding their responses which required a more open discussion than a structured questionnaire would allow. For the purpose of this research, the semi-structured interview template was based on Rubin and Rubin (2005) who suggested that semi-structured questionnaire would present main questions with scope for follow up and probe. Preparation for the interview involved pilot sessions with colleagues to check flow and clarity in advance of interviews.

Anticipating the need for individual interactions with teachers during these interviews, particularly given the dual position of research and named psychologist, children were assigned numbers by teachers and provided responses with numbers for full anonymity and confidentiality.

The style of interview was informal and based on the ‘conversation with a purpose’ approach (Burges, 1984). A script was prepared (Appendix 10) and followed despite the informal style

of the interview and four main questions were followed. Where questions were not clearly addressed prompts were used, including 'can you tell me a little more about that?. All questions were presented in the same session.

As suggested by Mason (2002) and Kvale (1996) the interview involved looking at the teacher constructs rather than 'excavation' of knowledge. In this case the type of information elicited was around views and understandings of interactions and therefore could meet the criteria of a social reality' and appropriate to qualitative interviews (Yates, Taylor, & Wetherell, 2001). Teacher perception is shaped by their personal experience, their culture and their interactions with children and the ratings scales in themselves presented a limited reflection which required further exploration for a study of such perceptions. Also, the knowledge sought was related to interpersonal situations in class and given its contextual nature the interview allowed a drawing of knowledge and interpretations. In order to avoid bias or influence, instruction was given that (as with the questionnaire) that children's prosocial ability in class should not be translated as prosocial capacity overall and questionnaires were completed privately by teachers and returns were anonymised. Further instruction to ensure that responses could be speculative and that there was no requirement for views to be backed up with fact and that given the study was around teacher perceptions, that teachers could be confident in presenting those perceptions.

The questions were open-ended with prompts to encourage a narrative. Although there was no time restriction from the researcher's point of view, within the real world of schools, and the needs of individual teachers, it was agreed in advance that around 15 minutes would allow time for the teachers to give their views. Interviews were held after school or during teacher's own planning period as suited. Teachers were invited to participate leading on from the

questionnaires and were asked to identify a confidential space and a copy of the class register. Headteachers had given previous involvement for the interviews to take place.

Two stages of informed consent were required through questionnaires and follow up questions. The headteacher initially gave consent to school involvement and invited staff to show verbal interest. Express consent was given and returned in writing. Fuller details of ethics consideration including informed consent and confidentiality are explained later in this chapter (see Section 5: Ethical Considerations)

No children were identified during the discussion and the use of registration number rather than names allowed (as with the questionnaire responses) complete anonymity with regards to the research. r. Teachers were again given the opportunity to join or to withdraw, but in all 8 cases teachers gave informed consent. For questions regarding seating arrangements, two teachers were not included in those responses as those teachers had open seating in their classroom.

A schedule of open questions was constructed around the perception prosociality as the area of interest.be constructed. Although the questions were open the interviews were not open-ended, and prompts were given when the interviewee gave off topic responses. As with Cecchin (1987) a stance of curiosity was taken by the interviewer to ensure that participants felt valued and comfortable in giving responses and the curiosity was made clear by approaching the responses with naïve questioning style to ensure that the views and beliefs given were accurately communicate.

Following Stratton's procedure (1988) extracting attributions in qualitative interviews words were taken from the interviewee and for that purpose, the interviews were intended as being recorded but following the first two interviewers rejecting the recording plan, a summary was gathered in writing, and notes were taken verbatim. This led to a limitation in that notes were used and

although care was taken to clarity accuracy in the written record by checking and asking for repetition where needed. The questions were not given as 'why' questions, following other studies such as Anderson (1991) and instead asked for description within the narrative with questions including 'can you tell me what you think are the reasons ….'.

Within the qualitative interview, teachers were invited to provide the ways in which they would interpret the benefits of having a prosocial child in class vs having a child who was less prosocial. This question was created as the laddering technique from Kelly (1955) which allows for deeper consideration of constructs and values about prosociality. Personal Construct Theory provided a basis to elicit subjective views from teachers that could identify the value that teachers placed on prosociality. Recent uses for laddering techniques and repertory grids is outlined in a number of studies within a number of disciplines (Marsden & Littler, 2000)

The method included a laddering technique to ask teacher preference with questions leading the laddering technique (as shown in Appendix 10). The narrative material was collected from eliciting constructs through specific wording (Fromm, Walter & Bachar, 2004). The construct analysis highlighted the importance of single characteristics for each respondent. For this study no further analysis of the component parts were conducted and the conclusions from the study were to illuminate the impressions of teachers in the study. The study was limited to a content analysis. This particular approach is used to elicit values and has been used in a number of fields but in particular in applied psychological disciplines including organisational, educational (Sewell, 2020) and clinical psychology (Wozniak, Hare, Gregg, & Wittkowski, 2024). It has also been used within marketing approaches to identify constructions of products in business (Imelwati, 2014)

4.4 Data Set 1- Questionnaires

Ethical approval was provided by University of Strathclyde and Aberdeenshire Council as detailed in Section 4.11 of this chapter.

Data Set 1 comprised questionnaire responses from teachers: eight classes of children in six schools in Aberdeenshire were classified by teachers on the prosocial scale provided through the five item measures taken from Goodman's Strengths and Difficulties Questionnaire Prosocial Profile. Aberdeenshire schools were invited to take part due to the researcher's links with the area, both geographically and professionally.

Schools, through HT at staff meetings, gave individual teachers an invitation to contribute to the data collection. Therefore, staff had individually and actively agreed to participate and response rates were high. Male and female teachers volunteered to take part in the study, without solicitation or planning for this balance. Two male and six female teachers took part broadly similar to the primary teachers in Scotland when categorised by gender (89% as reported by Scottish Government Statistics). Self-selected sampling took place and therefore the sample is not cross sectional. However, sample sizes were measured through a power calculation to ensure a basis statistical calculation (Bujang & Adnan, 2016). The sample was based on a single population proportion with a confidence level of 95% was required with a 0.5 margin of error. The total class population for Primary 3-6 within the eight schools was found at the time of study (N=1112) and the 8 participating classrooms who participated of 194 provided a (providing a 15% population proportion, 167 pupils was recommended for the hypothesis-based studies. (Lane, 2018: Ahmed, 2024: Sathyanarayana, 2024).

4.4.1 Hypotheses - Data Set 1

Study 1 Area of Study – Are there associations between gender and socio-economic factors and teacher ratings of prosociality. Based on available literature the following hypothesis was formed:

> Gender and socio-economic factors will affect teacher ratings of prosocial behaviour in their class.

Study 2 Area of Study – On which behaviours do teachers base their ratings of prosociality? Based on available literature, the following hypothesis was formed:

> There are stronger correlation effects within items as rated by teachers on the SDQ Prosocial when comparing correlations of overall score/ helping and overall score/caring

Study 3 Area of Study - What impact does teacher perception of prosociality have on classroom dynamics and teacher decision making in seating? Based on available literature, the following hypothesis was formed:

> Perceptions of children's prosocial level and child gender will affect teacher choices in seating arrangements.

4.5 Data Set 2: Semi-structured Interviews

A semi-structured interview with eight participating class teachers. The semi-structured interview involved four questions in prosociality to identify teachers' views of prosocial skills in the four research question topics (see Research Questions Section 2 of this Chapter).

4.5.1 Semi-structured Interviews Formulation

Data Set 2 comprised semi-structured individual interviews with participating class teachers (Questions 4 -7). Teachers' time was limited which resulted in some interviews being pre-arranged with a time limit to suit their needs. Exploratory questions were formed as below:

Study 4 Research Question: What do class teachers perceive to be the basis or causes of low prosocial behaviour in children and what attributes do teachers make about prosocial abilities? Semi-structured interviews were formed around questions using attribution theory.

> Semi-structured interview basis - Where do teachers place the locus of control in their attributions of perceived low prosociality?

Study 5 Research Question: What factors do teachers consider when teaching prosocial skills? Based on available literature, the following question formed the basis of the semi-structured interview.

> Do teachers view prosociality as fixed or changeable through teaching or intervention, and if so, how can it be taught and where is it placed within the curriculum?

Study 6 Research Question: How do class teachers report their perceptions of prosociality into classroom decision-making in respect of seating? Based on available literature, the following question was addressed.

> Do perceptions of prosociality influence teacher decision making when seating children with low prosocial ratings?

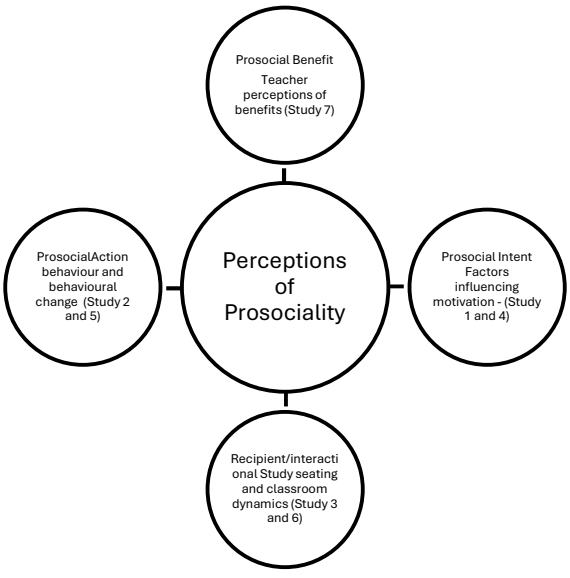
Study 7 Research Question: What are teacher perceptions of the benefits of prosociality? The study was exploratory to identify teacher responses about benefits of prosociality.

> What do teachers' core constructs when applying Personal Construct Theory techniques to identify underlying values and beliefs?

4.6 Data collection summary

Section 3 of this chapter discussed that the multi-dimensional element was undertaken as seven studies within a single framework. Returning to Figure 2 within scoping review (Chapter 2.4.4) , the studies were considered in cohesion and presented in Figure 3:

Figure 3: A Multi-dimensional Study Framework of Teacher Perceived Prosociality



The findings and analysis of these studies are summarised in Chapter 5. A summary of the studies is given below in Table 9.

Table 9: Summary of studies

Study Number	Study Title	Method	Data Type	Statistical Analysis
1.	Are there associations between gender and socio-economic factors and teacher ratings of prosociality.	194 questionnaires to 8 teachers for child ratings (SDQ Prosocial Profile scores)	Nominal scores of five sub-test items {(Scores = 0,1,2) Gender, Class-size and socio-economic given numerical code}	Analysis Of Variance (Anova) to determine score patterns within SPSS Test for Clustering Test for heteroskedasticity
2	Within the SDQ Prosocial Profile, a correlation between helping scores and overall prosocial scores will correlate less than in scores of caring and overall prosocial scores	194 questionnaires to 8 teachers for child ratings (SDQ Prosocial Profile scores)	Ordinal scores of five sub-test items (Scores = 0,1,2)	Cronbach's Alpha and Pearson Correlations for Inter-item and overall profile scoring.
3	Teacher perceptions of children's prosociality affect teacher choices of neighbour in that children with low prosocial ratings will be more likely placed with prosocial neighbours who are female.	Seating Plan – nearest neighbour set by child physically closest to child in default classroom position including only teacher selected seating models. Where seating was with more than one neighbour, the child's position was omitted.	Ordinal (SDQ prosocial composite scored category (1,2,3) for all children Nearest neighbour composite score Nearest neighbour by gender	Chi-Square used to identify patterns in category of overall composite score and nearest neighbour composite score. Raw data observation and crosstabulations led to a Chi Square test of nearest neighbour gender and Overall Composite Category. Exact measures test
4	Teacher attributions around children rated as having low prosocial skills.	Qualitative Interview for participating teachers who	Nominal (0,1) scores for locus, stability and	Coded analysis of responses Crosstabulations

		had scored at least one child as being within the low range for prosocial skills (7 teachers)	controllability and Qualitative	Summary of content by themes.
5	Teacher views on teaching prosociality.	Question (within Qualitative interview) for all participating teachers (8 teachers)	Nominal - by teaching approach (1. Moral Education, 2. Social Education or 3. Cognitive skill) and Qualitative	Frequency table with percentages.
6	Teacher decision making when seating children with low prosocial ratings	Qualitative Interview for teachers in classrooms with teacher selected seating plans (6 teachers)	Nominal (External or circumstantial 0/1 of nearest neighbour)	Coded for percentages of personality characteristics vs other circumstance. Personality characteristics – summary of themes. Circumstance - summary of themes.
7	Teachers' core constructs around prosocial abilities and the impact on the classroom.	Qualitative Interview and laddering technique for all participating teachers (8 teachers)	Qualitative and quantitative where similarity in constructs found	Summary of constructs given (Including groupings and numerical data)

4.7 Method

4.7.1 The primary research sample

The participants were eight primary teachers (6 female and 2 male) aged 24-52 years (mean age 41 years) from eight schools in the North Aberdeenshire area.

The teachers were asked to complete questionnaires for children who have been in their class for at least one term. A request was made of schools within the researchers' named schools via headteachers and teachers were then invited to take part, given further information and then provided confirmation of their willingness to take part in writing.

4.7.2 The secondary research sample

Children were the secondary research group for whom the teachers as primary research group provided perceptions through written questionnaires for each individual child. The sample comprised children from Primary 3–6 (ages 7–11), selected because they were considered developmentally able to engage with school routines and peer relationships.

4.7.3 Exclusions

Exclusions were made for teachers who had been in the school less than one complete term to ensure that teacher perceptions had formed prior to completing the questionnaire to ensure that a clear perception had formed for the teacher of the child.

Exclusions were made for children who have moved to the school in less than a complete term. For children who did not meet the criteria, no return response was sought. Teachers were asked to discount these children from the study who have joined the class in the past term and have not established clear perceptions around them.

For qualitative interviews, four questions were included. Two exclusions were made for two questions. Where teachers had not rated at least one child as within the low prosocial category, question 1 was omitted due to the question focusing on those particular children. Where teachers either did not use teacher selected seating plan or score a child as within the low prosocial category, those questions were omitted.

The host organisation was asked for permission to recruit participants via the ethics committee within the council and also through verbal consent being sought by headteachers The brevity of the measure and its reliability (based on previous studies) allowed a timeline in advance and teachers were told that they might expect to complete the information within around 30 minutes. Confidentiality was preserved throughout the study with children being anonymised through register numbers and returned questionnaires being confidentially stored throughout the data analysis as outlined with Section 5 of this chapter (Ethical Considerations).

The age group for the study were from Primary 3 to Primary 6 (inclusive). This age group was chosen as consistent with the scoping review undertaken for this study of primary age children but for practical purposes given limited the age group from Primary 3- 6 (typically 7 to 11 years old). The basis for this age group was that these children were more likely to have settled in school, developed an understanding of school rules, teacher expectations and routines and have typically developed their ability to take a perspective. The study relates to primary education and the exclusion of Primary 7 was to avoid over-burdening teachers within the pressures of timetabling within the transition year context.

4.7.4 Data Set 1 – Responses

Each child was discussed by their anonymous registration number and their names were not used at any point. The SDQ Prosocial Profile was presented without amendments, although an additional question was added to include gender of the anonymous child. For data collection, each class was assigned with a number. No questionnaires for new children were returned.

4.7.5 Data Set 2 - Qualitative Interviews

Classes with teacher selected seating were asked to provide information on the seating of each child by providing one class layout map with registration numbers to link with the questionnaire results. This part of the data collection linked to the findings regarding teacher selected seating choices for children. Therefore child-selected seating was not included, and two teachers were not included in this task. This written question (Appendix 9) asked for seating plans for children's 'default' seating position (where children's seat for where they spend their base time outside of movement for specific groupings such as moving for a maths group). The data gathered was to provide an SDQ Prosocial Profile scoring category in each individual child's near neighbour. Ambiguity in the completed had been considered a potential difficulty based on the encouragement of teachers to avoid exact ratio or measurement of classroom layout. However, the returned seating plans provided clarity around the seating. Exclusions were planned to be made if a child was seated clearly between two other children if the two other children belonged to different SDQ categories. On seven occasions children were found to have two near neighbours at similar distance, for instance in a table of six children with evenly spaced desks. However, no exclusions were required as the centred child was positioned between prosocial children at both sides.

The data were gathered and was accessible to the researcher only during processing. Information about the school's SIMD index was publicly available from the Scottish Government and was applied at community level rather than individual child level.

4.7.6 Participants summary

Teachers who had scored children within the low range (scoring 0-4 in the SDQ) out of the questionnaire were invited to take part in the qualitative interviews. Eight teachers were invited

and all agreed. One teacher had not scored a child in her class as low prosocial and was excluded from Study 4 and Study 6. Two teachers had child selected seating in class and were excluded from Study 5. Five teachers took part in the full question set and eight teachers took part in Study 6 and 7.

4.8 Data Analysis

A framework of planned questions and prompts was created and transcripts were recorded in writing and coded as below. Content analysis of the themes was interpreted and summarised Table 10 .

Table 10: Coding Summary Chart for Data Set 2

Question/Topic	Focus	Attribution	Statement Coding
Teacher attributions of low prosocial behaviour (Fiske and Taylor 1992)	Low Prosocial child	1. Internal/External 2. Stable/Unstable 3. Controllable/Uncontrollable	1. Within child characteristic/Circumstantial 2. Permanent state/short term descriptor 3. Behavioural consistency/behavioural difference
Teacher decision making in seating of low prosocial child	Nearest Neighbour of Low Prosocial child	Internal/External	Within Child characteristic/Circumstantial
Teacher perceptions: teaching empathy	Curriculum	Teaching approach	Moral/Emotional/Cognitive
Teacher constructs of prosocial behaviour in class (Kelly 1955)	Open question (no target)	Prosociality /Low Prosociality	Positives/Negatives

4.9 Ethical Considerations

Ethical Approval was obtained through the University of Strathclyde and from Aberdeenshire Council. This approval was sought for each data set.

The ethical issues considered impact on a school community when a research study is undertaken. In the particular issue assessed, (prosocial behaviour) the measure was exploring behaviours that could potentially be interchanged with moral behaviours. Helping, caring and sharing, are behaviours that primary schools use routinely as a moral expectation based on their expectation in children that they operate on the basis of fairness, politeness and generally being 'good'. Children, parents and teachers were considered as potentially impacted by a study relying on such judgements and by how the judgements being made, and the knowledge of what was being judged matters in this situation. There was a risk that the child and the behaviour might become too interwoven, and care was taken to separate behaviours from the child as a whole person. Teachers were able to report on children and there was no conflict demonstrated. This was emphasised to ensure that the information provided used language which described prosociality as a behaviour rather than a personal quality. Studies such as Kesner (2000) suggest that teacher reports of children's behaviour in the classroom when using reporting through questionnaires will be influenced by teachers' attitudes to children and therefore a need to focus on behaviour was necessary.

A specific concern existed regarding staff and in particular the impact on teachers taking part in a study which required subjective teacher judgements. The study involved the completion of questionnaires asking for teacher perceptions about every child in their classroom (unless parental permission was withdrawn) and specifically around the child's capacity for sharing, helping, and caring. The study incorporated teacher judgements about children's social

behaviours. Teachers may be uncomfortable in making such judgements about children because of the following reasons:

- The teacher was making judgements based on subjective information including how they themselves perceived the child and may have impacted on the teacher who felt that a resilient teacher is one who could provide positive responses and see the best in the child. The impact of making a less positive judgement may have produced in teachers a sense of disloyalty to a child with whom they enjoyed a relationship.
- With more 'hard' or objective information (for instance, reading attainments) teachers may have used objective data on which to base the decision, but with subjective information gathering, they may have had a more difficult experience, and required to spend time considering the child within their relationships with peers and the teacher. Giving a less positive score might have been a source of concern. In addition to the subjective nature of their judgement, the content of the questions was in 'softer' areas which might be interpreted as a moral judgement about the child's capacity to help, care and share.

In order to counteract this tendency or potential for negative impact, consideration was given to ensure that the language within the Participant Information Sheet emphasised the behaviours were not representative of a whole child and that in different settings they may display different behaviours, but that this study was about the classroom and was therefore limited and does not take account of the whole child.

A further ethical issue concerns the impact on parents for the following reasons:

- From the parents' point of view, they were aware of 'something happening' in the school. Parents may not routinely want their child to be different in a school context and therefore they may have felt a level of pressure to take part.
- Parents were also aware that teachers are making judgements about their child knowing which could have caused a level of concern or even discomfort in parents.
- Parents did not have access to the questionnaire responses which in in itself could impact on the parent, particularly for parents with children with additional needs and prioritise regular contact with schools or a higher level of transparency.

In order to reduce any difficulties or anxieties for parents, information was given around the type of study and details about an easy system of withdrawal at any time provided in writing to parents through a Participation Information Sheet. To circumvent parents becoming anxious or potentially misunderstanding the intention of the study, the information provided was limited to a study around helping, caring, and sharing behaviours in children and parents could contact the school for further information if desired. Although consideration was given to giving a very full account and explanation around the information being gathered (and reduce the possibility of misunderstanding between the assessment of behaviour as being an assessment of the child's attributes) this plan was dismissed as potentially raising anxiety rather than reducing it. This plan was given approval by Ethics by both Aberdeenshire Council and the University of Strathclyde.

Information was sent to participating teachers by email. Confirmation that children are not being asked to take a direct part in the study implementation was given expressly.

The children were in the primary education stage and their permission was be sought directly but was sought indirectly through parents. Although there was no intent that children would

be directly aware of the questionnaire contents which was completed out of hours, children might have also been aware of 'something happening' from parents or informal teacher reference as follows:

- The impact of knowing that one's behaviour was being considered may have led a child to feel somewhat exposed and react to the situation. Teachers were therefore asked to complete questionnaires based on their views across the year rather than carrying out observations at the time.
- Children who became aware of the study may interpreted helpfulness as being better and although could be unaware of teacher judgements, may reflected on this judgement and have experienced a negative reinforcement of 'she doesn't like me'.
- Children might have considered others in the same light and evaluated their peers as being more or less 'moral' (in the language appropriate to the age range).

Had children raised questions, teachers were encouraged to deliver in age and stage appropriate language. No check was made, and teachers reported no concerns or remarks made around the topic. Where no questions were asked or interest shown or comments made(either directly from the child or indirectly via the parent), no information was volunteered unnecessarily. Teachers were asked that in the situation where any child have displayed interest or concern then teachers were asked to assure through positive reframing that the study as being about 'how we help each other in class' with a view to helping other schools learn about 'our helpfulness'. No reports of displayed interest were reported by teachers informally and teachers and headteachers were confident in advance that they could address any questions and raise any concerns if needed. Direct assent was not sought by

children given the age range of the children and the absence of predictable impact on the child's experience.

Questionnaires were sent by email to teachers in Aberdeenshire schools with permission from the local authority granted in advance along with Headteachers and agreement from the staff member themselves. Parents were given information about the study and could withdraw their child from the study by contacting school staff. Teachers who were willing to respond were provided with a questionnaire that they were asked to answer on every child in their class and also to complete a classroom map showing teacher and children's desks with the child's registration number shown in the desk space.

Information regarding the classroom layout was gathered from class teachers. There was no need to identify particular children, and the information gathered was anonymised. The researcher had no direct knowledge of the children. Only the researcher and the participating teacher saw the resulting map and questionnaires. Following the questionnaire return the children were scored and categorised as prosocial, borderline and less prosocial with a view to gathering information about how teachers seat children in class and to determine any patterns that emerge.

Due to the pre-existing relationship with schools, steps were taken to ensure that participating teachers understand explicitly that there was no pressure to participate with them by communicating both through information sheets and participant letters that they were able to withdraw should they have felt unwilling to proceed and that prior to acceptance that they did not feel that there was any disadvantage to opt out or advantage to opting in. Schools had already worked in small scale research and were familiar with the research part of the psychologist role and in addition the message was passed on through headteachers in discussion at staff meeting when interested participants were asked to make contact if they

felt they would like to be involved. Staff were be reminded via the headteacher and in participant information sheets that there was no need to provide any reason to withdraw, at any time in the research. In order to avoid feeling any pressure, the researcher passed the information through the headteacher when seeking to recruit participants acting as a third party. It was made clear that the right to withdraw would continue throughout with no reason required.

A further consideration was that the dual role of researcher and named psychologist for a school may have potentially led to an overlapping or roles and therefore care was taken to ensure that information about all children remained unrecognisable to the researcher and not transferred in any capacity through the numbered system which allowed for full anonymity. No feedback regarding the perceptions of prosociality of individual teachers and pupils was given post-analysis.

Results from the seven studies are presented in Chapter 5.

Chapter 5: Results

Results from the seven studies are shown below (Studies 1-7/Sections 1-7). Quantitative questionnaire response data are presented (Studies 1-3) and in addition, qualitative data using semi-structured interviews are presented in Studies 4-7. 194 children (105 girls and 89 boys) were rated by eight teachers using the SDQ Prosocial Profile. The group comprised children from areas of relatively higher deprivation and lower deprivation. Data sheets of SDQ ratings are presented in Appendix 15 .

5.1 Study 1 Results

The hypothesis for Study 1 was gender and socio-economic factors will affect teacher ratings of prosocial behaviour in their class following on from studies such as Baumard & Chevallier (2015) Popa (2012), Jolliffe (2006), Hay & Pawlby (2003) or Piff (2010) that found gender and socio-economic level to affect perceptions of prosocial behaviour.

Overall, 84.7% of children were rated by their teachers as being within the prosocial category. 7.2% of children were found to score within the borderline category and 8.2% of children were rated within the low prosocial category. Descriptive Statistics are shown in Table 11.

Table 11: Details of Sample: SIMD, Gender and Teacher Prosocial Rating

Scottish Index of Multiple Deprivation

	N	%
Level 2 SIMD	96	49.5%
Level 4 SIMD	98	50.5%

Child Gender		
Male	89	45.9%
Female	105	54.1%

SDQ_CATEGORY		
Prosocial	164	84.5%
Borderline	14	7.2%
Low Prosocial	16	8.2%

Descriptives by dependent variable (prosocial ratings by teachers) and independent variable (gender and deprivation index) are shown in Table 12 as mean scores.

Table 12: Descriptive Statistics

Dependent Variable: Overall score on Strengths and Difficulties Questionnaire

GEN	SMID	Mean	Std. Deviation	N
Male	Level 2 SIMD	7.16	2.74	44
	Level 4 SIMD	8.71	2.17	45
	Total	7.94	2.58	89
Female	Level 2 SIMD	9.02	2.11	52
	Level 4 SIMD	8.79	2.27	53
	Total	8.90	2.19	105
Total	Level 2 SIMD	8.17	2.58	96
	Level 4 SIMD	8.76	2.22	98
	Total	8.	2.42	194

Tests of the assumptions for analysis of variance revealed that while the sensitive Breusch-Pagan test showed significant heteroskedasticity (Chi-square = 4.43, df=1 p = .035), findings from the White test (Chi-square = 2.21, df=3, p = .531), Modified Breusch-Pagan test (Chi-square = 2.13 df=1, p = .144), and f-test (f = 2.13, df =1, 192, p = .146.) indicated that the data met the requirements for a 2 x 2 independent groups ANOVA, as shown in Table 13.

Table 13: Two-way ANOVA gender and deprivation effects on prosocial ratings by teachers.

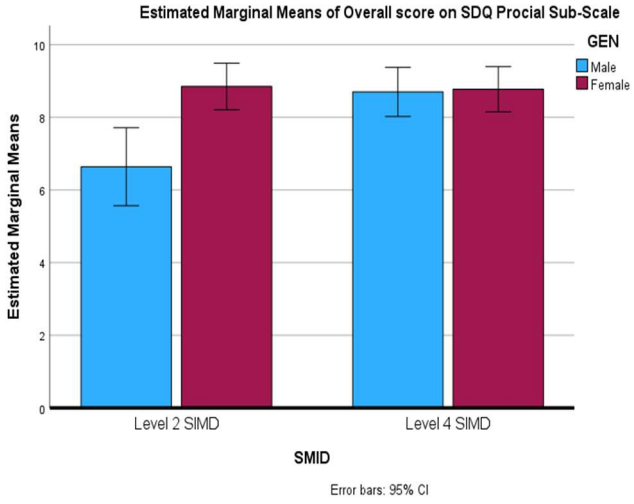
Tests of Between-Subjects Effects

Dependent Variable: SDQ Prosocial Composite Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	99.419[a]	3	33.140	6.132	<.001
Intercept	13660.375	1	13660.375	2527.658	<.001
GEN	45.388	1	45.388	8.398	.004
SMID	21.148	1	21.148	3.913	.049
GEN * SMID	38.100	1	38.100	7.050	.009
Error	1026.829	190	5.404		
Total	15024.000	194			
Corrected Total	1126.247	193			

The two-way analysis of variance yielded main effects for gender, ($F(1,190) = 8.40$, $p = .004$, partial eta squared 0.42) and for deprivation ($F(1,190) = 3.91$, $p < .049$, partial eta squared 0.20) such that the prosocial rating score from teachers was significantly higher for girls ($M = 8.09$, $SD = 2.11$) than for boys ($M = 7.94$, $SD = 2.58$) and that prosocial ratings from teachers in higher deprivation area were found to be significantly lower ($M=8\text{-}17$, $SD =2.58$) than in areas of higher deprivation ($M=8.7$, $SD= 2.22$). Significant interaction effects of gender and deprivation were found ($F(1,190) = 7.05$, $p = .009$, partial eta squared 0.36) as shown in Figure 4 below. The source of the interaction was investigated using independent two tailed t-tests with adjusted degrees of freedom in the case of a significant Levene's test:

Figure 4: Marginal Means (and 95% confidence intervals) for Prosocial Scores for Gender and Deprivation



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The source of the interaction was a significant effect of deprivation in the cases of boys (t = 3.67, df 79.05, $p < .001$, d = .83) with boys in schools of higher deprivation receiving lower prosocial scores, whereas there was no significant effect of deprivation in the case of the girls' scores ($t < 1$, df 96, p = .857).

Teacher ratings are nested within school classes but imbalance in responses across school classes precluded systematic analysis using multilevel modelling. However, a sensitivity analysis (as shown below in Table 14) adjusting for the effects of nesting on the main effect of gender, deprivation and gender/deprivation interaction confirmed the finding of the analysis above with significant main effects of gender (F(7, 177) = 2.47, p = .019, partial eta squared .09, deprivation (F(2, 177) = 3.48, p = .033, partial eta squared .04, and a significant interaction (F(1,177) = 4.68, p = .032, partial eta squared .03).

Table 14: Effects of Gender and Deprivation on Prosocial Score on Strengths and Difficulties Questionnaire Adjusting for School Class as a Nested Factor

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	224.394[a]	16	14.025	2.753	<.001	.199

Intercept	6552.397	1	6552.397	1285.989	<.001	.879
GEN(CLASS)	88.170	7	12.596	2.472	.019	.089
SMID(CLASS)	35.460	2	17.730	3.480	.033	.038
GEN * SMID(CLASS)	23.865	1	23.865	4.684	.032	.026
Error	901.854	177	5.095			
Total	15024.000	194				
Corrected Total	1126.247	193				

5.2 Study 2 Results

Study 2 was conducted to establish whether caring as a single sub-item on the SDQ scale correlates with overall scores when compared with other sub-item scores, based on earlier gender studies that found variations between scores resulted in ratings as a result of emphasis of a particular behaviour. Tintori, (2021) found gender differences that reflected an emphasis on 'caring' as more linked to prosocial behaviour than active and externalised behaviours associated with volunteering. Further studies have shown that increased empathy (or perspective taking) relate to higher levels of prosociality (as discussed in Chapter 3). This study sought to explore this association by considering sub-items ratings most closely related to caring (sub-item 'considerate to others') within the SDQ and compare the sub-item overall ratings by teachers with the more active sub-item of 'volunteering'.

The hypothesis was stronger correlation effects within items as rated by teachers on the SDQ Prosocial when comparing correlations of overall score/caring and overall score/volunteering.

Table 15 reports the part-whole Pearson Correlations between individual items on the SDQ Prosocial Profile and the overall profile score:

Table 15: Part-whole Pearson Coefficients with confidence intervals

Confidence Intervals

			95% Confidence Intervals (1-tailed)[a]	
	Pearson Correlation	Sig. (1-tailed)	Lower	Upper
SDQ Prosocial Composite Score - Volunteering Response	.812	<.001	.767	1.000
SDQ Prosocial Composite Score - Caring Item Response	.889	<.001	.860	1.000
SDQ Prosocial Composite Score - Helping Response	.834	<.001	.794	1.000
SDQ Prosocial Composite Score - Sharing Item Response	.899	<.001	.873	1.000
SDQ Prosocial Composite Score - Kindness Response	.884	<.001	.854	1.000
Volunteering Response - Caring Item Response	.594	<.001	.511	1.000
Volunteering Response - Helping Response	.714	<.001	.650	1.000
Volunteering Response - Sharing Item Response	.625	<.001	.546	1.000
Volunteering Response - Kindness Response	.626	<.001	.547	1.000
Caring Item Response - Helping Response	.611	<.001	.529	1.000
Caring Item Response - Sharing Item Response	.814	<.001	.769	1.000
Caring Item Response - Kindness Response	.752	<.001	.694	1.000
Helping Response - Sharing Item Response	.692	<.001	.624	1.000
Helping Response - Kindness Response	.742	<.001	.683	1.000
Sharing Item Response - Kindness Response	.789	<.001	.739	1.000

a. Estimation is based on Fisher's r-to-z transformation with bias adjustment.

Significant part-whole correlations and strong effect sizes were found for all items ($p < .001$, one tailed test) reflecting the overall reliability of the SDQ Prosocial Profile (McDonald's Omega, 0.91). Turning to the salience of caring versus volunteering, the focus of the study, the part-whole correlation for caring was $r = .889$, $df\ 194$, $p < .001$, and that for volunteering and overall score $r = .812$, $df\ 194$, $p < .001$.

The part-whole correlations for caring and volunteering were compared using 'Cocur' software based on Deidenhofen & Musch's modelling (2015). As the part-whole correlations were overlapping with a shared variable (the overall score), the analysis took account of dependent grouping and overlapping correlations. The results revealed a significant difference between caring and volunteering ($z = -2.79$, $p = .005$; Pearson and Fillon $z = -3.27$, $p < .0005$), in favour of caring and accordingly, the null hypothesis was rejected. Following Deidenhofen & Musch's modelling, two further checks were carried out which confirmed these findings (Hotelings $t = -4.23$, df 191, $p < .0001$; Williams $t = -3.51$, df 191, $p < .0003$).

For study 2, caring as a sub-item was found to correlate significantly higher level with overall score than the sub-item volunteering. This finding provides support for prosocial interaction as being an additional level of subjectivity. Caring may be internal and relies on interpretation of empathic concern where volunteering is a more external behaviour. The finding also lends weight to prosociality as being more closely linked to empathy. The implications are discussed in Chapter 6. This finding was a function of the large sample size where relatively small differences were identified. Further discussion (also in Chapter 6) around potential limitations is given.

5.3 Study 3 Results

The study investigated prosocial perception and teacher seating choices. Following explorations of teacher decision making in classroom seating (van den Berg, 2012, 2015 and Hoekstra et al, 2018) combined with studies linking classroom neighbour, reputation and behaviour (Rubie-Davies, 2014), this study sought to consider seating positions and prosocial

category and gender of closest neighbour. The study used categories of low prosocial, borderline prosocial and prosocial in line with the SDQ Prosocial Profile categorisation (Goodman Ford, Corbin et al., 2004). To recap, the hypothesis was teacher perceptions of children's prosocial level and child gender will affect teacher choices in seating arrangements.

Of the eight classes and teachers who participated in the study, six classes had teacher selected seating and two classes allowed children to choose their own seats. For the purposes of Study 3, only classes with teacher selected seating were included, and classes with child-selected seating were excluded, as the study set out to explore the impact of teacher perception on seating plans. Therefore, for this study the sample size was reduced from 194 to 162. The required sample size to provide a representative sample following Bujang & Adnan,(2016) (95% confidence level, 0.5 margin of error) was 159, reflecting a population of 12% of school population in the North Aberdeenshire cluster group. Further information provided in Methodology (Data Set 1) in Chapter 4.

Descriptive statistics of the sample group is provided in Table 16. Frequencies of the SDQ Profile categories were compared using male and female groups and by gender of neighbour are shown in Table 17 and 18. Neighbours are defined as the nearest child in distance when in default seating position (as detailed in Chapter 4 Methodology Section 8).

Table 16: Frequencies of Teacher Selected Seating by index child's SDQ Prosocial category *SDQ category frequency*

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Prosocial	143	88.3	88.3	88.3
	Borderline	10	6.2	6.2	94.4
	Low Prosocial	9	5.6	5.6	100.0
	Total	162	100.0	100.0	

Table 17: Crosstabulation of SDQ Prosocial category of Index Child with SDQ Neighbour Prosocial category

*SDQ_Category Index Child * Neighbour SDQ Category Prosocial Composite Crosstabulation*

		NEIGHBOUR SDQ PROSOCIAL CATEGORY			
		Prosocial	Borderline	Low Prosocial	Total
SDQ_CATEGORY INDEX CHILD	PROSOCIAL	125	9	9	143
	BORDERLINE	9	1	0	10
	LOW PROSOCIAL	9	0	0	9
Total		143	10	9	162

Table 18. Crosstabulation of Nearest Child by Gender with SDQ Category

*Crosstabulation of Nearest child in default class seating plan by gender * SDQ_CATEGORY*

		SDQ_CATEGORY			
		PROSOCIAL	BORDERLINE	LOW PROSOCIAL	Total
	MALE	76	3	0	79

NEAREST CHILD IN DEFAULT CLASS SEATING PLAN BY GENDER	FEMALE	67	7	9	83
Total		143	10	9	162

Table 17 revealed that there was no significant association found between neighbour SDQ category and index child SDQ category, (Chi Square Coefficient 2.15, p=.728, two tailed test) although this may have been a function of sample sizes where prosocial children exceed children with low prosocial ratings. Table 18 revealed that 3 cells (50%) had expected frequencies of less than 5, a 2 x 3 Fisher-Freeman-Halton Exact Test was used to examine the association between neighbour gender and prosocial category variables and revealed a significant relationship between neighbour gender and prosocial diagnostic category (FFH Exact Test Coefficient 11.83, $p < .002$, two-tailed test), with index children with low prosocial scores more likely to have a nearest neighbour who is prosocial and female. The nature of this association is further explored in Study 6 of this chapter. Consideration will be given in Chapter 6 (Sections 3 and 6) to consider the findings including this small study's limitations and the direction of further research.

5.4 Study 4 Results

Study 4 was undertaken to explore teacher attributions about their understanding of the basis and causation of prosocial behaviours in children. This exploration used attribution theory to build a framework for which to code responses of teachers within a qualitative interview structure. Attribution theory (Stratton 2003- see Chapter 4 Section 6) proposes that behaviours can be coded to establish one's beliefs in the stability, controllability and position of motivation (situational/dispositional) and that this attribution will influence the interpretation of the behaviour. The design of the study included a qualitative study to provide complementary enrichment of the information gathered.

Attribution theory was applied to position characteristics in children by teachers having an internal and external locus. Inductive themes emerged from the data and were coded manually. As per previous studies (Gedeon and Rubin, 2018) coding was implemented for causal statements which were individually extracted from the responses. . Each of these attributions is then coded on causal dimensions; Stable-Unstable, Internal-External, and Controllable-Uncontrollable. For each statement in this study consideration of this causation was carried out with an initial categorisation of each dimension and a listing of statements, followed by a repeat measure to confirm agreement of the interpretation of causal nature of the dimension within a minimum time period return gap of two weeks.

Teacher responses were separated into single views or pieces of information as individual statements to classify attributions for prosociality. These were coded by:

- External/internal classification – dispositional or situational factors
- Stable/unstable attribution – permanent or temporary factors
- Controllable/uncontrollable attribution – influence over outcome/no or very little influence over outcome.

Teachers were individually asked in Discussion Point 1 to consider each individual child that they had previously assessed in the SDQ and for whom scoring placed in the low prosocial category. As such 16 children were discussed individually with seven participating teachers. One teacher did not participate because she had not identified a child as low prosocial. The frequencies are shown in Table 19.

Table 19: SDQ Category, class group and class size frequency chart

Count

		SDQ CATEGORY			
Class Identifier		PROSOCIAL	BORDERLINE	LOW PROSOCIAL	Total
1	22	21		1	22
2	32	27	2	3	32
3	31	28	3		31
4	14	10	1	3	14
5	18	11	3	4	18
6	21	20		1	21
7	27	23	2	2	27
8	29	24	3	2	29
		164	14	16	194

The study design used a study of the themes presented by included teachers to elicit their attributions about children in their class that had low teacher ratings of prosociality. There was no capacity for maintaining all teachers within this study given that questionnaires were completed as Data Study 1. The interviews were conducted to provide further understanding of these teacher ratings but did not imply generalisation of these views.

Teachers had a minimum of one child and a maximum of five children within their classes, as shown in Table 20, and although this variation was noted as a possible limitation or potential further interest, no further measure to consider these variations was undertaken and the

attributions were considered collectively. All teachers included in the study answered the questions as given within the time limit of the interview.

Table 20. Low prosocial group (by teacher ratings) by class group:

		SDQ CATEGORY	
		LOW PROSOCIAL	Total
Class Identifier	1	1	1
	2	3	3
	4	3	3
	5	5	5
	6	2	2
	7	2	2
Total		16	16

In total 16 responses were transcribed (as shown in Appendix 12) and coded as 69 separate statements. Due to the small sample size of participating teachers, no separation in the data was carried out between teachers. The group contributions were combined to consider emerging themes across the group. The frequency of the attributes found are summarised in Table 21.

Table 21. Frequency Table of Teacher Statements of Prosocial attributions:

Attribute	Frequency
Internal (Child)	14
External (Home)	9
External (School)	0
External (Other)	0
Stable	22
Unstable	2
Controllable	22

Uncontrollable	0
Total Attributions Recorded	69

Internal Attributes

The statements were coded for internal characteristics that are related to dispositional or within child factors. Descriptions showing prosociality being linked to these characteristics was coded and identified through the positioning of the characteristics when used in explicit references by teachers. Three dispositional qualities were found within the combined narratives. Firstly, statements contained references to the child's responses to his or her peers (for instance 'he seems to think he's better than them' or 'if someone else is getting attention, he doesn't like that') and suggested a competitive quality. Internal attributions are shown in the statement list with thematic groupings shown below in Table 22. A second dispositional element that emerged was the description suggesting that the child was unaffected by teacher approval (for instance 'he doesn't seem to mind getting told off'). This trait appeared to be around a low level of being open to authority influence, suggesting the child and teacher's connection as being low. A third dispositional factor linking prosocial bases and internal disposition included narrative of a child unable to take pleasure in others' success, in a child who took pleasure in the pain of others (for instance 'he doesn't like to see others doing well'). Further a dispositional quality was demonstrable through the narratives as being inappropriate such as laughing when another child fell.

This finding would suggest that the situational factors are less considered by teachers who perceive the behaviour as being related to 'within child' motivators. These were most frequently interpreted as having negative connotations. On two occasions of positive connotations, references were made to a single characteristic as being potentially positive (competitiveness), but the quality lost its positive connotation because of excess (teachers talked about how it was good to be competitive but that the child didn't know where to stop

and couldn't enjoy the success of a peer). Examples of internal attributions of prosocial behaviour are given in Table 22.

Table 22: Statement examples by teachers coded as internal attributions of prosocial behaviours:

Internal attribution	Example
Competition	'he doesn't like to see anyone else do well' 'if someone else getting the attention, he doesn't like that' 'likes to be the boss/definitely control issue' 'seems to think ..better than them' 'it's his agenda or nothing'
Closed to influence by others	'you can't talk him round, some you can but you can't with him – no idea why just think he's like that' 'doesn't seem to mind getting told off' 'doesn't bother him, whatever we do/he doesn't care'
Inappropriate	'he seems to like when someone hurts themselves like he laughed when a wee toot fell'

External Attributes

Statements were coded by external attributions where the locus of control was attributed to factors outside of the child where prosocial behaviour resulted from situational factors. Statements coded as having external dimensions and themed by the situational/external factors are shown in Table 23.

Family circumstance was referred as having an effect on the child's prosocial capacity (for instance 'left alone a lot'. Parenting issues were the most cited external factor given for teachers presenting their views on the foundation of prosocial behaviour. Parenting that was perceived as neglectful or chaotic or lazy could be viewed as a basis for the resulting behaviour. This style of parenting was perceived to produce messy structures at home for the child to navigate social relationships. Similarly, a lack of inconsistency in parenting approaches was perceived as having an influence on the capacity of the child (for instance inconsistent household rules or inconsistent personalities in parents). Further, a lack of

consistency for children was perceived as a difficulty in there were inconsistent messages between home and school.

Teachers' perceptions of the roots of prosocial behaviour places the family as the largest influence on promoting the child's capacity with home structures, inconsistencies and circumstantial changes in child's experience as being significant factors presented.

Parental influence when presented as positive was referenced as a difference in the child and parent or family. This capacity of a child who is resistant to influence by parents, reinforces the dispositional aspect that teachers appear to attribute to low prosociality (for instance, 'tells to hit back when we are saying no we are saying one thing and they are saying another' or 'parents present a good picture, but don't carry it out at home').

In some statements, the child's internal qualities were combined with external factor as a reinforcement rather than an explanation. The external attribute was not directly linked to the internal characteristic. For instance, where parents were raised in the discussion who received positive character attributes ('the parents are lovely but at the end of their rope') the lack of explanation at home led to an internal attribution for the child ('family are lovely, he's very different to siblings, he's very blank'). Examples of external attributions regarding prosocial behaviour are given in Table 23.

Table 23. Example statements coded as external attributions:

Theme	Statement
Family changes	*'dad works away now and I think he's left alone a lot'* *'moved up here and I don't think he has really settled'*
Home structures	*'left to it'* *' watching stuff..... shouldn't be'* *'they present a good picture but I don't think they carry it through at home'* *' didn't have a great start'* *'trauma in life'* *' rules the roost'* *'can't blame (child)really''they could have deferred but didn't because of work'*

Inconsistent messaging	*'tells to hit back when we are saying no we are saying one thing and they are saying another'* *'don't think gets same message at home/'*
Positioning of external factors	*'mind you his brother and sister were totally different, don't think they know what to do with'* *'I've had loads of children with worst homes and they have been lovely'* *'I don't think it's their fault, they do best they can'* *'he'd be like that anyway'*

Stable/Unstable Dimension

Grammatical structures were also coded by stability/instability dimensions as shown in Table 24. First statements were coded for present tense, without qualifications (for instance, 'he is' or 'he can't'). On some occasions the statements were often preceded with 'maybe' 'could be' and the link was presented as a cautious possibility and these were coded as unstable (for instance, he seems to' This appeared to be due to the information being indirectly gathered (for instance the child said to the teacher rather than the parent).

44 statements were made that suggested a fixed state or characteristic ('he is' or 'she does' or 'he likes'.) with a present tense verb given without moderation except in two cases where statements were less stable ('*can be*…. or *'if he's'*).

Although some unstable features were found ('if he's in the right mood') the commentary in context indicates this instability as also being dispositional (moodiness) rather than context dependent. These analyses would suggest a perception of these attributes as being stable. Examples of attributes within the stable/unstable dimension are also given in Table 24.

Table 24. Example statements coded as stable/unstable:

Dimension	Example
Stable	*'He can't see things from others' point of view'* *'He knows what he is doing'* *'He doesn't care'* *'He is competitive'* *'Just like that'*
Unstable	*He can be (a bit monotone).'* *'If he's in the right mood'* '

Controllability dimension

Coding took place for statements by their narrative structure which identified in the theme of the content. These statements are shown in Table 25. Control was indicated as being present when the content indicated a teacher impression of a child having control or choice in his or her response. Within this dimension, attributions of control were made in 20 statements. No attributions were made as reflecting uncontrolled responses.

Twenty statements made given suggesting a controllable factor in low prosocial behaviour (for instance 'he knows what he is doing', 'he can help it if he's in the mood' or 'he smirks, he knows it's wrong'). In one case of suspected autism, the attribution remained as having a measure of control ('they think he's maybe autistic, but you can see that he knows what he's doing'). Within the study, there were some separations in attributes of autism as being outside of the control of the child, but for children with low prosocial ratings the lack of controllability was reversed. (For instance, 'I've had autistic children before but he's not like that'.)

On two occasions teachers cited other children who were not in control of their behaviour as a comparison measure ('I've seen other ones that can't help themselves and they get upset and calm down but with (this child) he knows what he is doing'.

Five teachers made references to a deliberate approach in the child's approach through in remarks which appeared outside of their control (for instance 'he's just like that'). Example statements within the control dimension are also given in Table 25.

Table 25. Example statements coded as controllable attribution:

Theme	Examples

Deliberate	'he knows what he's doing' 'he smirks at me but goes home and says something different' 'can help it if in the mood or if he's getting something'

Further discussion of the limitations of the small sample group is given in Chapter 6. On the basis of the coded statements the following conclusions were drawn

- Teacher attributions given within a semi-structured interview regarding the basis of low prosocial behaviour suggest that internal attributions around individual characteristics reflecting a disposition for prosocial behaviour. These dispositions were thematically grouped as competitiveness, inappropriate responses to others' emotional states, and being resistant to teacher influence.
- Situational factors were presented but as further exacerbation of low prosocial disposition responses rather than a causal explanation. Situational factors were related to family and home circumstance.
- Teachers' perceptions of children that they have scored as low prosocial also yielded responses that suggest a fixed disposition.
- Children with low prosocial ratings are perceived as having control over their responses. An absence of intentionality in prosocial responses suggest that intentionality and control as being a definitive component of low prosocial perception

5.5 Study 5 Results

This study set out to explore teachers perception of prosociality as being a fixed or changeable feature and to what extent it can be changed through teaching or interventions in school. It also sought to explore methods used, if it can be taught and where is it placed within the curriculum.

Eight participant teachers responded to this question and the target of the discussion was teaching approaches (see Appendix 13). Responses were divided into different statements for two respondents who provided descriptions in both categories.

The response statements were classified into two teaching approaches:

1. General: Integrated throughout the school day in response to classroom events
2. Specific: Formal lessons within school curriculum

The purpose of the study was to ascertain how teachers would teach prosocial skills as a measure of further understanding teacher perceptions of prosociality. Study 4 results suggested that teacher perceptions of prosociality is that it is a fixed and dispositional quality. The implications for the question, given these teacher beliefs seems moot to some extent. As such this study presented a conceptual question regarding by what mechanism prosociality might be taught by both curricular area and through pedagogic approach.

The theory of planned behaviour, (as described in Chapter 3) suggests that attitudes, norms and controllability factors are significant for predicting success in behavioural change. In schools behavioural change therefore is predictable based on teacher attitudes, teachers' perceptions of norms and teacher perception of capacity to a change child or class approach. Given that teachers in this study appear to have low perceptions of their capacity to change prosocial approaches, then the question allowed insight into teacher positioning of prosociality as resulting from moral, cognitive or social aspects. As such a further question was included to consider the curricular positioning of such teaching and responses were therefore coded by subject area, alongside the integrated/specific teaching approaches as shown in Table 26.

Table 26: Teacher responses regarding the teaching of prosocial behaviour

Teaching approach	Curricular area (where given)	Sample
General		*Just giving reminders and trying to make sure she understands /about being kind.* *I try and make sure empathise if someone is sad/about being kind* *talking to him and explaining to him why it was wrong.* *We have class rules about fairness and having respect for each other. Not specific – going through the day and they know the rules.* *part of the school ethos and being kind to each other is in our school ethos.* *If someone is upset, we talk about how that feels. We teach them to have empathy, and they are inclusive.* *We are a nurturing school, and we follow Rights Respecting Schools. We are all trained to be nurturing / about having respect for different people and all that*
Specific lesson	Health and Well-being	*We use restorative (practices) to try and give them an idea about understanding feelings and being empathic- emotion works is used* *And as well, as part of the health and well-being, we do a lot on understanding emotions.* *We do a lot in emotional well-being about understanding feelings and recognising them.* *It's also part of the curriculum/emotional and understanding feelings.*

Results of the semi-structured interviews suggest that teachers when asked about teaching skills in prosociality will cite specific and general programmes. The general responses as shown display a moral education ('making good choices' whereas specific lessons tend to follow school programmes such as Emotion Works to support identification of feelings or build capacity for empathy. The programmes cover a range of regulation techniques to support children manage anger and identify sadness in others. Moral education was not cited as a specific lesson to support these approaches, and the results would suggest that teachers

when asked about teaching 'prosocial' skills use the term interchangeably to some extent with empathy. Empathy seemed to be a significant reference point both in the integrated 'moral' education throughout the school day regarding fairness and kindness and within HWB as a curricular area. Empathy in this case was cited more as a feeling, or a moral value and there were no references to cognitive empathy or perspective taking.

The formal lesson structure was cited as part of the curriculum and taught within programmes adapted for the children in the class. There was no information gathered around the content of the specific programme or the type of teaching and learning within the programme. Within the more integrated day, the method of teaching was cited most often as talking to the child and explaining verbally the underlying message.

5.6 Study 6 Results

This study explored perceptions of prosociality influence teacher decision making when selecting neighbours for children with low prosocial ratings. For this study, the target child of the discussion was the nearest neighbour to the children with low prosocial ratings as identified by the teacher through the composite scoring on the SDQ Prosocial profile. Two teachers were not included because the classes did not use teacher selected seating. Five teachers responded to this discussion point overall with 19 statements identified for analysis. The classification allowed separation of teacher decision-making as incidental or specific decision and disposition of neighbouring child within the transcribed responses (Appendix 14).

The limitations of this reduced sample were acknowledged, and the inductive data was considered exploratory and was not understood as being representative of the whole sample and did not account for differences in school cultures or other factors such as teacher gender.

Five teachers took part and provided responses to the question around seating position. On average teachers made five statements in response to being asked to describe seating factors for children with low prosocial ratings. All teachers made responses. The statements were coded for internal attributes as shown in Table 27 below. Teacher decision making was found to be rarely incidental within this study with the characteristics of the nearest neighbour explicitly being taken into account when teachers made these decisions. The characteristics of the nearest neighbour as perceived by teachers included quiet nature and tolerant. References to the child 'not minding' suggested a compliance that was deemed important to teachers, which could suggest that-compliance is a required feature in a child or that non-compliance would influence the other positive characteristics. This non-compliance/compliance measure was not referred to explicitly by teachers and is interpreted through descriptions of quiet and tolerant personalities. References were made to these children being able to support the low prosocial child by providing balance and reducing conflict and teachers' recognition of kindness and conscientiousness suggesting that teachers perceived these children as experiencing moral benefit. The positive descriptions implied approval from teachers in this circumstance. Example statements coded by dispositional (perceived 'within child' characteristics) are also shown in Table 27.

Table 27: Teacher responses and rationales coded by disposition and targeted decision making:

Dimension	Examples
Targeted	*She's a bit of a chatterbox but he seems to like her or at least she doesn't bother him* *I asked her and she said yes* *I asked him where he wanted to (sit) and we made a deal.*

	I'd move her if I thought she wasn't. She quite likes sitting there.
Disposition	*he fell out with (other child) and was winding people up so I put him at a table of girls and try and see if it would help and so far it's worked fine. There's less bickering. (PROMPT) they are sensible girls* *I put (low Prosocial child) her beside (neighbouring child) – thought it might bring (low prosocial child) into the group a bit more she's really kind. I mean they all are .* *I actually asked her would she be okay sitting there – but it's good for her as well – she doesn't put up with nonsense* *She's a lovely girl and doesn't bother and he listens to her nattering away.* *She is the quietest wee thing* *and I think she's doesn't care* *She wouldn't say boo to a goose and they seem to get on fine.* *They don't sit together all day but when they do (low prosocial child) can be annoying, she messes up her stuff but I keep an eye of them. She's patient with her* *Oh she's (neighbouring child) just a lovely girl and doesn't mind* *she (neighbouring child) gets on with it and ignores him, hard worker (1).* *he tries and takes her stuff sometimes and she's quiet but she doesn't put up with anything* *if he tries …like to keep the Ipad when they share it. She makes me laugh when you see her telling him he has to share. She can stand up for herself*

5.7 Study 7 Results

This study explored teachers' core constructs through using Personal Construct Theory techniques to identify their underlying values and beliefs around the benefits of prosocial behaviour within the classroom context.

Core constructs were based on Kelly's 1955 Personal Construct Theory (more recently updated by Kawgan-Kagan, I., & Daubitz, 2017) which has an application in a number of settings to explore subjective terms and also to identify the individual's own constructs or values.

A pilot of this approach took place with colleagues for checks for timing and confirmation of clarity of the interview information. The pilot demonstrated that participants became

repetitive after three cycles of questioning, and a decision was made to limit each participant to three cycles of questioning to place a time limit.

Kelly's repertory grid and laddering technique (See Chapter 4 Section 6) is a repetitive grid structure building on responses by participants as a way of understanding their meaning and avoiding confusion in terminology as having different meanings for different individuals. The questioning technique involved asking teachers to consider the impact of prosocial and eliciting short phrases/adjectives. The impact of low prosocial behaviour in class is also sought through similar questioning and follows a specific technique with standard questions as shown below, with results and word associations and laddering as shown in Table 28. Core constructs were identified using this technique, as shown in Table 29.

Core constructs presented in phrase or single words were grouped thematically for the eight participant teachers and checked with the participant during the semi-structured interview for agreement. The core constructs for the benefits of prosocial actions within a classroom setting were as follows:

- Easy/hard

  Teachers' constructs of prosocial action vs low prosocial action included (from eight teachers) three references to easiness/hardness. Similar in theme, two constructs of lightness/heaviness were made.

- Enjoyable/unenjoyable

  A construct of enjoyability/less enjoyable which seemed in accordance with the general sense of low prosociality requiring more effort to maintain harmony in the classroom which could occur without specific extra effort for children with prosocial ability.

- Fairness/unfairness

  Teachers also referred to measures of fairness in the discussion suggesting that there is a resource issue of teacher time being (in their perceptions) unfairly distributed with low prosocial behaviours in class.

Table 28: Benefits of Prosocial behaviour in class - Kelly's Laddering Technique

INTERVIEWER:	*Can you describe the impact of prosocial behaviours in class? (Record answer X)*
INTERVIEWER:	*'Whereas low prosocial would be?' (Record answer Y)*
INTERVIEWER: '	*And would you prefer X or Y?*
INTERVIEWER:	*'Because (X or Y) would be (adjective or phrase recorded)*
INTERVIEWER: 'Whereas (X or Y) would be?	*Continue for three cycles maximum*

Table 29: Teacher responses to core construct laddering of prosocial benefits in class.

= denotes word ladder

Prosocial impact	Low prosocial impact	Construct
Nicer = relaxed = easier	Not nice = tense = everything's harder	Easier/harder
Kinder = feels nice = lighter	Harder = not enjoyable – heavier Time consuming = harder = worse	Lighter/heavier
Nicer day = easier = better = better Everyone getting on = fairer = lighter	Not fun = eggshells = tense better	Easier/harder Lighter/tenser
Easier = manageable = feel better after	Harder = don't like it = harder	
More time = fairer = better for everyone	Rushed = not giving enough to some = unfair	Easier/harder
Less tense = less tired = feel getting somewhere	Exhausting = don't like job = feel not good at it	Fairer/less fair
More fun/enjoyable = nicer = happier = enjoyable	Harder day = not nice = not as happy = less enjoyable	Impactful/less effective Enjoyable/less enjoyable

Discussion of all studies including results, limitations and potential implications are discussed in Chapter 6.

Chapter 6: Discussion

This thesis adopted a critical realist position as discussed in Chapter 4 and sought to explore prosociality in children by considering not only what is observed in classrooms, but also the social processes and underlying influences that may shape those observations. Within this framework, prosociality is not understood as a fixed trait located solely within the child, nor as a simple product of context. Rather, it is viewed as emerging from the interaction between individual dispositions, social relationships, and wider structural and cultural influences.

The discussion that follows considers each study in turn, drawing together quantitative and qualitative findings to explore how prosociality is recognised, valued and responded to in primary school settings. Throughout, the focus remains on understanding prosociality as a relational and contextual phenomenon, while remaining cautious about over-interpretation and mindful of the limits of the data. The intention is to offer an interpretation that is theoretically informed, critically reflective, and relevant to applied psychological practice in schools.

6.1 Study 1 – Gender and Socio-economic Factors in Prosociality

6.1.1 Summary and interpretation

Consistent with earlier studies (e.g. Jolliffe, 2006; Baumard & Chevallier, 2015), the data indicate that children rated by teachers as low in prosociality are more likely to be male and

from more socio-economically deprived areas. The hypothesis was therefore accepted. This study has also found that most children are 'prosocial enough' when assessed by teachers for these behaviours/traits. 85% of children were found in this study to be assessed by teachers to be scoring 6–10 (the prosocial group) in the SDQ Prosocial Scale. A further 8% of children are found to be within the borderline category scoring. In the low prosocial ratings category, 7% of children received teacher ratings as within the low category. As expected, gender and social factors were found to be significant in that children from more socially deprived areas appear to be rated less prosocial overall and that boys overall, were rated lower than girls in the same areas, in a similar pattern shown in studies of academic outcomes and behavioural studies. The link is not suggested as causal and demonstrates an association only, in the same way as previous studies such as Rosenthal's Pygmalion effects. Within these empirical findings, there are significant differences in the likelihood of teachers' ratings of boys being lower than girls in deprived areas and that this finding, although based on subjective judgement, holds across different schools and staff sets. This is not to suggest that the boys within these settings are being perceived unfairly by teachers, but rather that there are mechanisms at play when such a tendency exists. Teachers may make this judgement without conscious prejudice, but that the interplay between what teachers experience and the factors that influence this group of boys seem to generate consistency in outcome. Situational or contextual factors appear to play a part in the resulting behaviour or attribute. These may reflect contextual pressures associated with deprivation, expectations around gendered behaviour, and the interaction between children's behavioural responses and teachers' perceptions over time.

From a critical realist perspective, these teacher ratings represent empirical observations that are produced through everyday classroom interactions. They are not treated here as objective measures of children's internal dispositions, but as meaningful professional judgements that

are shaped by teachers' experiences of children within particular social and institutional contexts. The consistency of these judgements across different schools suggests that they are not arbitrary but reflect shared professional understandings and patterns that extend beyond individual teachers.

6.1.2 Implications

Teacher perceptions may also identify a cognitive weakness in perspective taking in a child. Where perceptions of a child are negative, or a child seems less sympathetic, there can be an opportunity for staff to recognise demographic influence on particular children and framing the low prosocial child as being vulnerable to situational factors resulting in dispositional responses that may be perceived negatively in schools. Teachers are trained to understand the impact of poverty, gender, disability and other factors affecting outcomes. Reframing prosocial perceptions of teachers and providing support to teachers to identify these perceptions as potential vulnerabilities might allow a reframing in the teacher's relationships. It was also noted in the study that girls in areas of higher deprivation are perceived (in mean scoring) as more prosocial by teachers. This finding could be linked to perceptions being relative and where teachers perceived boys to be lower in prosocial ratings (as was the case for boys in higher deprivation) then perceive girls as more so.

6.1.3 Further study

Further research could explore a larger sample group to consider the impact of demographics and to ascertain the consistency of the finding, for instance exploration of the consistency of teacher perceptions of children over primary school stages. In addition, the 'prosocial' enough group are those scoring between 6 and 10 on the SDQ and this range could be explored to determine whether the effects of gender and deprivation show effect sizes within the group.

This study has not included data around externalised negative behaviours and their influence on teacher ratings, and variables of behaviour or attention levels would be of interest.

A further area for consideration is whether teacher perception of children is known by children – and whether a level of causation is present as a child leans into the perception in a self-fulfilling prophecy as has been proposed in studies such as Gentrup (2020).

The mean score variation between girls of low vs high deprivation is worthy of consideration to explore why girls from higher deprivation areas are perceived as more prosocial by teachers. Consideration of whether this finding is based on changes in perception based on comparison with others, or whether the girls demonstrate higher prosocial behaviour to in some way compensate is of particular interest.

Consideration of the extent that deprivation factors influence perceptions of prosociality, through considering a sample group from more polarised groups with factors such as rural and urban setting, would be of interest. In addition, further study of emotional states such as anger and resentment and links with increased bullying in deprived areas (as proposed by Kraus & Stephens (2012)) would also be of interest, in keeping with studies around the impact of environmental harshness such as Popa & Bochis (2012).

6.1.4 Limitations

The study was limited to eight teachers in primary schools in one geographical area and therefore there are significant limitations to generalising factors (particularly demographic factors) on the basis of a limited sample. In addition, the study relied on voluntary sampling which may be a limiting factor. Although measures to consider within study factors such as clustering, without another comparison group, these results may vary based on geography and cultural norms within the limited area.

The sample size within this particular study was taken from eight classes and the small groups of children with low scores within those classes, led to limitations in clustering effects analysis. The interaction could be related to a ceiling effect because all children in the study were found to have higher scores in lower deprivation area and also by nature of the SDQ scale and the relative size of low and borderline groups.

As previously discussed (4.2.1) there were limitations of using collective data for a school community to identify socio-economic status. The existence of pockets of higher or lower socio-economic outliers, is a potential limitation as school communities are not homogenous socio-economic groups and can be mixed. Within this context, this study acknowledges that there may be variations, and within the real-world setting, with the absence of specific data on specific families which would not be appropriate or accessible, this concern is noted but argues that a broad approach retains validity.

The SDQ Prosocial Profile, while a valid and reliable measure, categorises children scoring between 6 and 10 as prosocial, offering limited opportunity to explore differences within this broad group. From the perspective of this study, this represents a lack of nuance in capturing

variations in prosocial expression, particularly where children may demonstrate prosocial behaviours inconsistently or in less visible ways.

6.2 Study 2 – Empathy and Prosociality

6.2.1 Summary and Interpretation

This study explored the relationship between teacher perceptions of empathy-related behaviours and overall prosocial ratings. The findings indicated that *caring* was perceived as a key requirement for children being rated as prosocial, with caring showing a stronger association with overall prosocial scores than more overt or action-based behaviours such as volunteering. The hypothesis was therefore accepted.

These findings can be understood as highlighting the importance of how prosociality is recognised and interpreted by teachers, rather than simply how it is enacted by children. At the empirical level, teachers rated behaviours that they perceived as caring more highly when forming an overall judgement of prosociality. At the level of actual classroom interaction, these judgements draw on repeated observations of children's responses to peers, adults and group situations. At a deeper level, the findings suggest the presence of underlying mechanisms related to beliefs about empathy, motivation and character.

This interpretation lends support to earlier research suggesting that gender differences in prosocial ratings may relate to how prosociality is expressed and valued, rather than to overall levels of helpful behaviour (Rankin & Eagly, 2009). Caring behaviours, which may be quieter and less visible than action-based helping, appear to carry greater weight in teachers' assessments. Where caring is prioritised, children who demonstrate prosociality

through visible actions may be less readily identified as highly prosocial. This may contribute to gendered patterns in prosocial ratings, particularly if caring behaviours align more closely with social expectations of girls.

The findings also align with developmental models that emphasise empathic concern as part of prosocial development (e.g. Eisenberg). However, from a critical realist perspective, it is important to differentiate between observable behaviour and the internal processes that may underlie it. Teachers infer motivation and emotional engagement from behaviour, yet these inferences are necessarily interpretative. A child may possess empathic understanding without displaying it in a way that is readily observable in the classroom. Conversely, a child may display caring behaviours that are socially learned or strategically deployed without reflecting deeper empathic engagement.

Notwithstanding Study 1, where contextual and situational factors appeared to play a stronger role in teacher judgements, this study points towards the role of dispositional interpretations. Teachers appeared to attribute meaning to small behaviours and to infer stable characteristics relating to empathy and caring. Within a critical realist understanding, these judgements operate as part of the actual social process of assessment, but are shaped by deeper cultural beliefs about empathy, morality and appropriate social behaviour in children.

6.2.2 Implications

The findings raise questions about how empathy is understood and identified within school settings. Empathy is not taught as a discrete subject within Scotland's Curriculum for Excellence; however, it is embedded across the curriculum and fostered as part of an integrated approach but is particularly highlighted within the Health and Wellbeing area, to support development in respectful relationships, understanding others, and responsible

citizenship. Consequently, empathy is fostered implicitly through learners' social and emotional development and their capacity to respect and understand diverse perspectives. Empathy may function as an umbrella concept that incorporates emotional sharing, concern for others and cognitive perspective taking. In practice, teachers in this study appeared to equate empathy closely with caring behaviours, potentially overlooking the distinction between affective and cognitive empathy (Batson, 2002).

For schools, this distinction may be important. A child may be able to take another's perspective but lack the emotional regulation or confidence to express care overtly. Equally, a child may experience empathic concern internally but be unable to act on it, for example through withdrawal or avoidance. In these cases, teacher perceptions may not fully reflect the child's internal experience.

From an educational psychology perspective, this finding is noteworthy. Teachers routinely differentiate between cognitive development and affective responses in other domains, such as learning difficulties and attention. Viewing aspects of empathy, particularly perspective taking, as a cognitive capacity rather than solely an emotional or moral quality may offer a more nuanced framework for understanding children who struggle to demonstrate caring behaviours in expected ways.

Teachers in this study appeared confident in identifying empathy or its absence, often using character-based language such as kindness or compassion. While such interpretations are meaningful within everyday practice, they may also inadvertently position empathy as a fixed quality rather than a capacity that can vary across contexts or develop over time.

6.2.3 Further Study

Further research could explore what specific behaviours teachers associate with caring, and how these perceptions are formed. Qualitative exploration of teacher examples may provide greater nuance in understanding how empathy is recognised in classroom contexts. Additional work examining differences between cognitive and affective empathy, and how these are perceived at different developmental stages, would also be of value.

It may also be useful to examine whether teacher ratings of empathy align with children's self-reports or peer reports, and whether highly prosocial children (e.g. those scoring above 9 on the SDQ Prosocial Scale) demonstrate particular cognitive or imaginative strengths that support empathic engagement.

6.2.4 Limitations

As with Study 1, this study relied on voluntary participation from a limited geographical area, and therefore findings may reflect local cultural expectations around caring and empathy. In addition, the SDQ provides limited response options, which restrict the extent to which variation within prosocial behaviours can be explored. Greater qualitative elaboration alongside quantitative ratings may have provided a more nuanced account of teacher perceptions.

6.3 Study 3 – Seating Factors

6.3.1 Summary and Interpretation

This study examined teacher-selected seating arrangements and found an association between children's prosocial category, the gender of their nearest neighbour, and teacher

decision-making. Specifically, children rated as low in prosociality were more likely to be seated beside a prosocial neighbour who was female, regardless of the gender of the low-prosocial child. The hypothesis was therefore accepted.

At the empirical level, this finding reflects observable seating patterns selected by teachers. At the level of actual classroom practice, these decisions represent deliberate strategies used by teachers to manage peer relationships and promote classroom harmony. From a critical realist perspective, these seating arrangements are understood not simply as pragmatic choices, but as practices that may be shaped by deeper, less visible influences.

The finding suggests that teachers may associate particular prosocial qualities with girls more readily than with boys. This does not imply conscious bias or intentional gender differentiation. Rather, it points to the possibility that shared cultural expectations around caring, responsibility and emotional regulation operate as underlying mechanisms that shape decision-making in routine classroom contexts. Teachers appear to draw on these expectations when selecting pupils perceived as best placed to support others.

The association between prosocial girls and children rated as low prosocial is notable given that prosocial boys were available within the sample but were not selected for this role. This suggests that prosociality alone may not fully explain teacher choices and that gendered interpretations of prosocial behaviour may play a role in how responsibility is allocated within the classroom.

6.3.2 Implications

The implications of this finding are relevant to everyday classroom practice. Teachers appear to make seating decisions with the intention of supporting children who are perceived as less prosocial, and to reduce conflict and disruption. However, the consistent use of prosocial girls

in this role raises questions about how responsibility is distributed and whether certain pupils are routinely positioned as emotional resources for others.

Previous large-scale studies have demonstrated gender differences in emotional wellbeing as reported by parents (e.g. Nakajima Jung, Pradhan et al., 2020), though these findings relate to parental perceptions rather than teacher judgements. In the classroom context, the present study suggests that teachers may be drawing on similar assumptions when making practical decisions, even if these assumptions remain implicit.

From a critical realist standpoint, these seating practices can be understood as outcomes of interaction between individual teacher judgement and broader cultural norms regarding gender and care. Teachers may be reflecting dominant societal beliefs that girls are more mature, more responsible or better able to manage relational difficulties, and these beliefs may shape classroom organisation in ways that are largely taken for granted.

The findings also raise the issue of how seating positions may influence children's self-perception and peer relationships over time. Research has highlighted links between seating, social status and classroom reputation (Van den Berg & Stolz, 2018). Being repeatedly positioned beside a child perceived as low prosocial may send implicit messages to both children about their roles within the group.

6.3.3 Further Research

Further research is required to establish whether these findings are replicated across a wider range of schools and geographical areas. Exploration of whether children rated as low prosocial also present with higher levels of externalised behaviour would be of particular interest, as this may influence teacher seating strategies.

In addition, future studies might explore whether teachers consciously perceive gender when making these decisions or whether the process operates at an unconscious level consistent with earlier qualitative research on gender in classrooms (e.g. Skelton et al., 2009). Such research has shown that teachers often view gendered practices as common sense or necessary for classroom functioning, even when they aim to treat children equally.

The potential impact of these seating practices on prosocial girls themselves also warrants further investigation. The long-term effects of being positioned as responsible or supportive peers, particularly during formative years, remain unclear and may have implications for identity development and expectations around care.

6.3.4 Limitations

This study involved a relatively small sample, and the imbalance in prosocial categories — with the majority of children rated as prosocial — limits the extent to which broader conclusions can be drawn. The study also did not examine seating arrangements in contexts where children self-selected neighbours, which would provide an important comparison to teacher-directed seating. Further research with a larger and more diverse sample would be required to explore whether the observed pattern reflects a wider trend or is specific to the schools involved in this study.

6.4 Study 4 – Teacher Attributions

6.4.1 Summary and Interpretation

The qualitative studies (Studies 4–7) were designed to extend understanding of the teacher ratings examined in Studies 1–3 by exploring how teachers conceptualise prosociality and

make sense of children's behaviour. Study 4 focused specifically on teacher attributions, drawing on principles of attribution theory to examine how teachers explain low prosocial behaviour.

The findings suggest that teachers tend to interpret low prosocial behaviour as having internal or dispositional origins. Teachers described children with low prosocial ratings as lacking empathy, exercising control or choice over their behaviour, displaying resistance to teacher influence, and seeking authority or dominance. These attributes were discussed as stable characteristics of the child rather than as situational responses.

These accounts represent an empirical expression of teacher interpretations formed through repeated experience. At the level of actual social practice, such interpretations function to guide teachers' responses to children and shape expectations of behaviour. At a deeper level, the findings point towards underlying mechanisms relating to beliefs about capacity for control and moral responsibility.

A notable distinction emerged in relation to neurodiversity. Teachers differentiated clearly between children perceived as low in prosociality and those with recognised autistic profiles. In the latter case, teachers attributed behaviour to factors beyond the child's control, whereas low prosocial behaviour was more often framed as involving choice and intention. This distinction suggests that teachers operate with an implicit framework that separates involuntary limitation from deliberate motivation, with blame more likely to be attached where behaviour is perceived as chosen.

Although both neurodiversity and low prosociality were discussed as dispositional, the moral weight ascribed to each differed. Within a critical realist interpretation, this reflects deeper cultural narratives about responsibility and agency rather than objective differences between

children. Teachers' attributions appear to be influenced by socially shared understandings of what children *can* and *should* control.

Teachers consistently described prosociality as a trait-like quality, rooted within the child, rather than as something shaped primarily by context. Parents and home circumstances were acknowledged but were not typically seen as sufficient explanations for low prosocial behaviour. Teachers frequently cited examples of children experiencing adversity who were nevertheless perceived as prosocial, reinforcing the view that prosociality was understood as a matter of character and choice.

6.4.2 Implications

This finding has important implications for schools and for applied psychological practice. Teacher attributions shape how children are responded to, supported and included within classroom communities. Where low prosociality is interpreted as a stable internal characteristic with negative connotations, children may be positioned as resistant or difficult rather than as vulnerable.

Although this study did not examine behavioural difficulties directly, teachers' discussions suggested that challenging behaviour alone did not determine prosocial judgements. Children who demonstrated remorse or responsiveness to teacher guidance were not viewed in the same way as children perceived as low in prosociality, even when behaviour was difficult. This suggests that attribution is not simply reactive to behaviour, but influenced by interpretations of motivation and openness to influence.

Teachers in this study appeared to form holistic judgements about children that incorporated emotional security, motivation, empathy, cognitive capacity and values. These judgements were then used to infer how effectively a child could function within group contexts and

authority structures. From a broader social perspective, such inferences are likely to influence children's access to inclusion, support and positive relationships.

Research suggests that children who are perceived negatively by adults are more likely to experience rejection and exclusion, and that such perceptions can be stable over time. For schools, the ability to recognise how these perceptions form — and how they may reflect underlying attributional mechanisms rather than fixed child characteristics — is therefore of significance.

6.4.3 Further Research

This study involved a small sample of teachers within a limited geographical area, and it would be important to explore whether similar attributional patterns are evident in other contexts. Differences in school culture, levels of deprivation and staff training may influence how teachers construct explanations for children's behaviour.

Further research could also examine how teacher attributions interact with institutional pressures, such as classroom management demands and time constraints, and whether these factors strengthen dispositional interpretations of children's actions.

6.4.4 Limitations

As with the other qualitative studies, the small sample size limits generalisability. In addition, teachers opted to work from written transcripts rather than audio recordings. While this approach appeared to support comfort and openness when discussing children, it may have influenced pacing and depth of reflection, particularly where participants reviewed and clarified their statements during the discussion

.

6.5 Study 5 – Teaching Prosociality

6.5.1 Summary and Interpretation

This study explored teacher views on how prosociality can be supported or developed within the classroom. Teachers consistently described approaches that focused on increasing children's emotional knowledge and awareness, particularly through discussion-based strategies and emotion-focused programmes. Building empathic concern was viewed as central to promoting prosocial behaviour, either through specific interventions or through ongoing integration into daily school life.

Teachers did not typically refer to prosociality as a cognitive capacity to be developed, such as perspective taking, nor was there reference to moral education as a distinctive curricular approach. Instead, empathy was discussed largely as an affective quality, understood as the sharing or mirroring of emotions. Where empathy was perceived as absent or limited, teachers described encouraging it through increased emotional dialogue and modelling.

At the empirical level, they reflect what teachers say they do to support prosocial behaviour. At the level of actual practice, they reveal shared approaches shaped by professional training,

curricular priorities and available programmes and point towards underlying assumptions about the nature of empathy and how it develops.

Teachers appeared to operate with an implicit understanding of empathy as a largely affective and relational capacity, something that might be drawn out or encouraged through discussion and emotional awareness. Cognitive components of empathy, such as perspective taking, were less visible in their accounts. This suggests that the mechanisms shaping approaches to teaching prosociality may include dominant professional discourses that prioritise emotional literacy while giving less attention to cognitive development as it relates to social understanding.

This interpretation is particularly relevant given the findings from Study 2, where caring behaviours were seen as central to prosocial judgements, and Study 4, where prosociality was often interpreted as a stable, dispositional quality. Together, these studies suggest a coherent pattern in which teachers value empathy highly, understand it primarily through emotional expression, and seek to promote it affectively rather than cognitively.

6.5.2 Implications

The findings raise questions about how schools conceptualise and support empathic development. While emotional awareness programmes are widely implemented and valued, the absence of explicit focus on perspective taking may limit how prosociality is understood, particularly for children who experience difficulty expressing care in conventional ways.

From an educational psychology perspective, this distinction is important. Cognitive capacities such as perspective taking are frequently supported through targeted strategies when difficulties are identified in other domains, such as memory or processing. Viewing aspects of empathy in a similar way may offer an alternative route for supporting children

whose internal understanding of others' experiences does not translate easily into observable caring behaviours.

The findings also suggest that teachers may assume that talking about empathy will lead to empathic behaviour. While this may be effective for some children, others may require more structured support that acknowledges developmental differences in cognition and emotional regulation. Without this distinction, children who struggle to demonstrate empathy may be misinterpreted as unmotivated or uncaring, rather than as experiencing specific cognitive or emotional challenges.

Teachers in Aberdeenshire have had significant exposure to emotion-based programmes such as EmotionWorks, and it is possible that these initiatives have influenced how empathy is conceptualised in practice. While such programmes offer valuable language and tools, a more balanced understanding that includes cognitive and moral dimensions may enhance how prosociality is supported in schools.

6.5.3 Further Research

Further research could explore how teachers understand perspective taking in relation to empathy and whether this distinction is meaningful to classroom practice. Investigation into how different approaches to teaching empathy affect children at varying developmental stages would also be of interest.

In addition, comparison between secular and faith-based schools may provide insight into whether moral education features more prominently in approaches to supporting prosocial behaviour in different educational contexts.

6.5.4 Limitations

This study reflects the views of teachers within a limited geographical area and may be influenced by local policies, training opportunities and prevailing educational approaches. There is considerable overlap within the Curriculum for Excellence between emotional, social and moral education, and this may have contributed to the way teachers articulated their views. Further exploration would be needed to disentangle these influences.

6.6 Study 6 – Teacher Decision-Making in Near Neighbour Seating

6.6.1 Summary and Interpretation

Study 6 followed on from the quantitative findings of Study 3 by exploring how teachers described their decision-making when selecting near neighbours for children perceived as having low prosocial skills. The focus of this study was on understanding how teachers explained and justified these seating choices, rather than on evaluating their appropriateness or effectiveness.

Teachers described making conscious and deliberate decisions regarding the seating of children with low prosocial ratings. These decisions were framed primarily in terms of supporting classroom harmony, reducing conflict and facilitating positive peer interactions. Teachers described selecting children they perceived as calm, responsible and able to model appropriate behaviour for others. While gender was not explicitly cited as a criterion, the children identified as most suitable for this role were consistently female.

These accounts represent teacher interpretations of their own practice at the empirical level. At the level of actual classroom processes, these seating decisions function as a mechanism for managing behaviour and relational dynamics within the group. In addition, the findings

suggest the presence of underlying cultural beliefs relating to care, responsibility and emotional regulation that may shape these decisions, even when they are not explicitly acknowledged as described by Donovan et al's (2023)'hidden curriculum'.

The rationale offered by teachers focused on the perceived ability of prosocial girls to act as calming influences, to role model appropriate social behaviour and to mitigate potential difficulties. Teachers spoke positively about these pupils and viewed their contribution as beneficial to the wider class community. However, prosocial boys were not described as taking on the same role, suggesting that prosocial behaviour alone was not sufficient to explain the pattern.

These findings indicate that teacher decision-making may be influenced by gendered expectations regarding caring and responsibility. From within a critical realist framework, this does not imply conscious bias or discriminatory intent. Rather, it suggests that shared cultural norms and professional practices operate as generative mechanisms that influence everyday decisions in classrooms.

6.6.2 Implications

The findings of this study have implications for understanding how positive characteristics are distributed and utilised within classroom structures. While teachers' intentions were consistently framed in terms of support and inclusion, the repeated positioning of girls as responsible peers raises questions about how children are socialised into particular roles within educational settings.

The role of the "responsible girl" appeared to be perceived positively by teachers, and there was no suggestion that this positioning was viewed as burdensome or disadvantageous. However, from a broader psychological and sociological perspective, the repeated allocation

of caring and regulatory roles may contribute to the internalisation of expectations around emotional labour and responsibility.

Research has suggested that being positioned positively by teachers can nonetheless have unintended effects on children's sense of identity and peer relationships (e.g. Trusz, 2017). While the seating arrangements described here do not equate to preferential treatment, they may operate in similar ways by signalling particular expectations and responsibilities.

For the child perceived as low in prosociality, such seating decisions may also carry implicit messages about their social role and standing within the group and understood emerging through interaction rather than being imposed intentionally.

The findings also resonate with wider research indicating that gendered practices persist in classrooms despite teachers' explicit commitment to equality (Donovan et al., 2023). These practices appear to operate at the level of routine decision-making and are supported by shared assumptions about what is appropriate or effective.

6.6.3 Further Research

Further research could explore the impact of these seating practices on the girls who are positioned as prosocial role models, particularly in relation to their experiences of responsibility, pressure or expectation over time. Longitudinal research may provide valuable insight into whether such early classroom roles influence later identity development or attitudes towards care and responsibility.

It would also be important to examine children's perspectives on these seating arrangements. Understanding how children interpret their seating positions and the roles they perceive themselves to occupy would add an important dimension to the findings.

In addition, replication of this study across a wider range of schools and contexts would help to establish whether the patterns identified here reflect a broader trend or are shaped by local culture and practice.

6.6.4 Limitations

As with the other qualitative studies in this thesis, the sample size was small and confined to a limited geographical area. Teachers' accounts were based on reflective discussion and may not capture the full complexity of decision-making in dynamic classroom environments.

Written note-taking rather than audio recording was used, which may have influenced the flow of discussion and the depth of responses. However, this approach appeared to support openness and comfort when discussing sensitive aspects of practice.

6.7 Study 7 – Teacher Constructs of Prosociality

6.7.1 Summary and Interpretation

Study 7 explored how teachers conceptualise prosociality by eliciting core constructs using Kelly's (1955) Personal Construct Theory. Teachers consistently described children who were perceived as prosocial as being "easy," while children rated as low in prosociality were described as requiring more effort, time and management.

These constructs were often articulated at a group level rather than an individual level, suggesting that teachers were drawing on shared professional categories rather than isolated experiences. The finding aligns with Hawley's (1999) Resource Control Theory, particularly in relation to the distribution of time and attention within classroom contexts.

Teachers described their experiences of managing groups and these experiences reflect ongoing processes of resource allocation within classrooms, and the findings suggest that classroom structures and pressures operate as mechanisms shaping how prosociality is defined and valued.

Children perceived as requiring more time were implicitly positioned as disruptive to the equitable distribution of resources. In this way, prosociality appears to function as a characteristic that supports group efficiency, rather than solely as a moral or relational quality. This interpretation does not imply that teachers view such children negatively, but that institutional constraints influence how ease and effort are understood and prioritised.

6.7.2 Implications

The identification of "ease" as a core construct has important implications for children who may struggle with perspective taking or social cognition. For some children, including those with neurodivergent profiles, the goal may not be to be easy but to challenge, question or seek fairness within group contexts. When group efficiency is implicitly valued, such behaviours may be misinterpreted as low prosociality rather than as differences in social orientation.

From an educational psychology perspective, this raises questions about how prosociality is taught and assessed. Social skills programmes often focus on helping children learn explicitly what others acquire implicitly. Making the expectations of group functioning clearer — including the value placed on ease and cooperation — may support children who find these norms difficult to interpret.

The findings also suggest that teachers conceptualise prosociality primarily within the domain of social education, rather than cognitive development. Viewing aspects of

prosociality, such as perspective taking, as cognitive capacities that can be explicitly supported may offer a more inclusive approach for children who do not intuitively align with group norms.

6.7.3 Further Study

Future research could explore how prosociality operates differently in one-to-one interactions compared with larger group contexts, and whether children who are perceived as low prosocial in groups demonstrate different strengths in individual settings.

Additional work examining the relationship between teacher stress, class size and prosocial judgements would also be valuable, as these factors may influence how resources are perceived to be stretched or constrained.

6.7.4 Limitations

Participants appeared candid and engaged in this phase of the study, although opportunities for follow-up discussion may have elicited further insight. Practical constraints on teacher time and the realities of school environments, including interruptions and limitations on interview duration, may have shaped the data collected.

6.8 Educational Psychology and Prosociality – Implications

A further purpose of this study was to consider how the social psychological research base can offer educational psychologists regarding prosociality in children. Educational psychologists are involved in assessment of children and to enhance understanding of how a child perceives the world. They do so by gathering information about the child's cognitive

approaches, dispositional and situational factors. Broad categories of behaviour and regulation skills, learning, communication, physical factors, sensory integration skills and social interaction provide a framework to form a basis for intervention. This study may offer a further insight into an area that may increase vulnerability levels in children and allow for increased understanding of the risk factors it signals. Children are complex and it is not to say that one factor will provide this understanding, but within the complex tapestry, this insight is likely to be helpful.

Prosociality has relatively low recognition within the Educational Psychology profession, but it has an evidence base from Social Psychology which suggests that these small behaviours are relevant to our profession in that the area helps us understand more about classroom dynamics. Higher levels of prosociality improve relationship quality and harmonious working environments. Within a classroom setting, and irrespective of longer-term outcomes, this harmony is desirable in and of itself to educators in general. Further, prosociality provides an insight into social interactions within peer groups and allows an understanding of where a child is struggling or conversely where a child is succeeding. Although educational psychologists have long held knowledge and interest in social interactions, prosociality and social interaction are not interchangeable. This tendency to help, care and share at a small scale is distinct: a child may have appropriate social interaction skills in that they can communicate effectively but show little prosocial behaviour or prosocial intent. Social interactions also tend, within assessments to focus on whether the child's ability to manage conflict. Prosociality speaks of a child's capacity of co-operating with a group or dealing with authority and their identity within the group. There are also children who may struggle for instance with social interaction (for instance related to confidence) but who are identifiable by a teacher as having positive attributes such as kindness. Such consideration of these attributes within consultation and within assessments

of children could support the identification of children as being at additional risk of negative outcomes. Returning to the conceptual model, there are many children who may be confronted with challenges in their young lives that range from situational to dispositional factors but who are able to be scaffolded to be 'prosocial enough'. For children with additional needs an added layer of difficulty as evidenced by low prosociality allows educational psychologists to focus on those potentially higher risk attributes that may lead to negative outcomes.

The SDQ Prosocial Profile is a blunt measure but provides an evidenced base framework for identifying those children, and for teachers to provide an assessment framework that considers such behaviours in a framework that teachers have confidence. For educational psychologists working within schools, having access to a brief but significant measure may be helpful in determining risk or protective factors in children.

It should be noted that children who are low in prosociality may have particular other strengths and that these tools as predictors of negative outcomes may not point to a particular need in a child. Where a child knows he or she has this tendency and is comfortable with their approach, schools rightly do not aim for personality change or make an assumption that a perception matches reality.

Some aspects of prosociality are linked to sociological factors and it is important for educational psychologists to reflect on the impact of social class and to what extent social class values are evident in prosocial definitions.

Further consideration of prosociality by educational psychologists could lead to important and significant gains in supporting young people. This may enable educational psychologists

to not only understand risk factors better but also to design proactive, preventative interventions at classroom and whole-school level.

6.9 The tip of the iceberg

The study focused on practical implications for schools. The conclusions below were therefore with a view to how an academic study could have practical implications for applied psychologists and school staff with a view to making this study accessible and useful. School staff require resources that are readily applicable to their practical context, and therefore some specific consideration is given to this issue.

Prosociality is best understood as the tip of an iceberg and hints at what lies below the surface. It is not understood as a behaviour that can be coerced in children. It speaks of a child who has dispositional and contextual 'advantage' in that they are able to bond with adults, use perspective, notice a need in others and are motivated to help. These small behaviours provide schools with an insight into a factor that shows vulnerability if absent. The child who is not prosocial, who does not appear to want to help, care and share, demonstrates a need. For educational psychologists and teachers, understanding the nature of this need and its motivation is important but is not confused with well-intentioned but likely unsuccessful use of interventions that make a causal link between prosociality or specifically teacher perception of prosociality and later outcomes. This study has found that small interactions of prosociality carry larger meanings and can indicate higher or lower risk of later outcomes for children. In this way, prosociality signals potentially significant underlying issues, that may impact on a child's future. Teaching these skills may not be redundant and most schools would recognise the need for encouragement of getting on with

others through using these skills in their general school populations. However, for the group of children who appear to have limited tendencies in this area, there is no evidence to suggest that it is an easy fix to ask them to behave in this way, when it is their interactional style based on their underlying disposition and situational factors that lead to their approach. Drawing attention to this issue is valuable for schools but it is of more importance to consider what the absence of prosociality is demonstrating, in terms of their individual needs. To understand children in their disposition and their situation is very important to schools but is more helpful when considering that they have a predictive power and can interpret by keeping an eye out for the iceberg below. This study has found a proportion of children (around 15%) who are showing difficulties in being prosocial. These children appear, based on this study to be vulnerable and require consideration and it is the hope of this researcher that schools may pay attention to their predictive power and the likely impact of this small but recognisable factor.

Finally, this study presented this factor as being more clearly understood as an interaction and emphasised that subjective teacher perceptions are the basis of prosocial levels, including those linked to objective outcomes. The study considers the predictive power of prosociality in teachers and considers how this potential can be used, to enhance the experience and understanding of young people in our schools. It also emphasises that there is no causal link established and concludes that it may raising understanding in professionals working in education of young people. The signal of low prosociality is an important one but cannot be over-stated that interventions in developing relationships is complex and interventions to 'fix' low prosociality, ill-advised.

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Appendices

Appendix 1: Scoping Review Included Study List

No.	**Title of study**	**Authors**	**Publication Year**	**First Published**	**Country**
1	Student–teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school	Claudio Longobardi, Michele Settanni, Shanyan Lin, Matteo Angelo Fabris	2020	British Journal of Educational Psychology	UK
2	Developmental Relations between Children's Peer Relationship Quality and Prosocial Behaviour: The Mediating Role of Trust	Marc Jambon and Tina Malti	2022	Journal of Genetic Psychology	Canada
3	The warm glow of kindness: Developmental insight into children's moral pride across cultures and its associations with prosocial behaviour,	Joanna Peplak, Beatrice Bobba, Mari Hasegawa , Simona Caravita and Tina Malti	2023	Developmental Psychology	Canada
4	Prosocial behaviour mediates the relation between empathy and aggression in primary school	Pietro Spataro Martina Calabrò Emiddia Longobardi	21 Feb 2020	European Journal of Developmental Psychology	Italy
5	Journey Around the World Curriculum: Bridging global and prosocial education	Savina, Elena	2 March 2020	Childhood Education	USA
6	Children's Prosocial and Aggressive Behaviours: The Role of Emotion Regulation and Sympathy	Giovanni Maria, Federica Zava, Elena Cattelino, Antonio Zuffianò, and Susanna Pallini	2023	Journal of Applied Developmental Psychology	ITALY

7	The Impact of Socialisation on Children's Prosocial Behaviour. A Study on Primary School Students	Tintori, Antonio, Giulia Ciancimino, Rossella Palomba, Cristiana Clementi, and Loredana Cerbara	2021	International Journal of Environmental Research and Public Health	ITALY
8	Home Learning Environment and Out-of-home Activities: Their Relations to Prosocial Behaviour and Peer Relationships in Primary School Children	Volodina, Anna	2023	Current Psychology (New Brunswick, NJ)	USA
9	Developmental Links between Well-being, Self-concept and Prosocial Behaviour in Early Primary School	Dempsey, Caoimhe, Rory Devine, Elian Fink, and Claire Hughes	2023	British Journal of Educational Psychology,	UK
10	A Daily Breathing Practice Bolsters Girls' Prosocial Behaviour and Third and Fourth Graders' Supportive Peer Relationships: A Randomized Controlled Trial	Von Salisch, Maria, and Katharina Voltmer	2023	Mindfulness	CANADA
11	Self-Concept, Prosocial School Behaviours, Well-Being, and Academic Skills in Elementary School Students: A Whole-Child Perspective	Wikman, Carina, Mara Westling Allodi, and Laura Anne Ferrer-Wreder.	2022	Education Sciences	SWEDEN
12	Direct and Indirect Associations of Empathy, Theory of Mind, and Language with Prosocial Behaviour: Gender Differences in Primary School Children	Longobardi, Emiddia, Pietro Spataro, and Clelia Rossi-Arnaud	2019	The Journal of Genetic Psychology	ITALY
13	On the Importance of Being Agreeable: The Impact of Personality Traits on Prosocial Lying in Children	Demedardi, Marie-Julie, Yannick Stephan, and Catherine Monnier	2021	International Journal of Behavioural Development	FRANCE
14	"Individual and Sociodemographic Factors Associated to Prosocial Behaviours and Academic Performance in Portuguese Elementary School Children: Highlights from a National Study After COVID-19 Child Indicators Research	Carvalho, Marina, Cátia Branquinho, Catarina Noronha, Barbara Moraes, Nuno Rodrigues, and Margarida Gaspar De Matos.	2023	Child Indicators Research	PORTUGAL
15	How Popularity Goal and Popularity Status Are Related to Observed and Peer-nominated Aggressive and Prosocial Behaviours in Elementary School Students	Lansu, Tessa A.M	2023	Journal of Experimental Child Psychology	NETHERLANDS
16	Disentangling Between- and Within-person Associations between Empathy and Prosocial Behaviours during Early Adolescence	Carrizales, Alexia, Susan Branje, and Lyda Lannegrand	2021	Journal of Adolescence	FRANCE
17	Halo and Association Effects: Cognitive Biases in Teacher Attunement to Peer-nominated Bullies, Victims, and Prosocial Students	Marucci, Eleonora, Beau Oldenburg, Davide Barrera, Antonius H. N. Cillessen, Marloes Hendrickx, and René Veenstra	2021	Social Development	NETHERLANDS
18	You Can't Sit with Us…just Kidding! An Investigation into the Association between Empathy and Prosocial Teasing	Platt, Michelle, Christine K. Malecki, Amy Luckner, Kristina Wiemer, and Yoonsun Pyun	2022	Psychology in the Schools	USA
19	A Person-Centered Exploration of Peer Aggression and Prosocial Behaviour in Early Adolescence	Hopkins, S. W., A. K. Marks, and G. D. Fireman	2023	Contemporary School Psychology	USA
20	Friendship Processes Around Prosocial and Aggressive Behaviours: The Role of Teacher–Student Relatedness and	Shin, Huiyoung, Allison M. Ryan, and Elizabeth North	2019	MERRILL-PALMER QUARTERLY-JOURNAL OF DEVELOPMENTAL PSYCHOLOGY	USA will engage in such behaviour in the future

	Differences Between Elementary-School and Middle-School Classrooms				(Bandura, 1977; Rulison, Gest, & Loken, 2013).
21	Disaggregating Between- and Within-Classroom Variation in Student Behaviour: A Multilevel Factor Analysis of Teacher Ratings of Student Prosociality and Aggression	Murray, A. L., Obsuth, I., Eisner, M., & Ribeaud, D.	2019	Journal of Early Adolescence	SWITZERLAND
22	Irritability and Limited Prosocial Emotions/Callous-Unemotional Traits in Elementary-School-Age Children	Waschbusch, Daniel A. ; Baweja, Raman ; Babinski, Dara E. ; Mayes, Susan D. ; Waxmonsky, James	2020	Behaviour therapy	USA
23	Creating Positive Learning Environments in Early Childhood Using Teacher-Generated Prosocial Lessons	Johnston, Callum B ; Herzog, Teresa K ; Hill-Chapman, Crystal R ; Siney, Caitlin ; Fergusson, Ashley	2019	Journal of educational research and practice	USA
24	Direct and Indirect Associations of Empathy, Theory of Mind, and Language with Prosocial Behaviour: Gender Differences in Primary School Children	Longobardi, Emiddia, Pietro Spataro, and Clelia Rossi-Arnaud	2019	The Journal of Genetic Psychology	ITALY
25	Reactive Attachment Disorder Symptoms and Prosocial Behaviour in Middle Childhood: The Role of Secure Base Script Knowledge	Cuyvers, Bien, Eleonora Vervoort, and Guy Bosmans	2020	British Medical Council Psychiatry	BELGIUM
26	The Impact of a School-Based Musical Contact Intervention on Prosocial Attitudes, Emotions and Behaviours: A Pilot Trial with Autistic and Neurotypical Children Autism	Cook, Anna, Jane Ogden, and Naomi Winstone	2019	International Journal of research and practice	UK
27	Discrepancies Between Teacher- and Child- Reports of Proactive and Reactive Aggression: Does Prosocial Behaviour Matter?	Mildrum Chana, Sofia, Elizabeth C. Tampke, and Paula J.	2021	Journal of Psychopathology and Behavioural Assessment	USA
28	Being Helpful to Other-Gender Peers: School-Age Children's Gender-Based Intergroup Prosocial Behaviour	Sonya Xinyue Xiao1 , Carol Lynn Martin1 , Tracy L. Spinrad1 , Nancy Eisenberg2 , Dawn DeLay1 , Laura D. Hanish1 , Richard A. Fabes , and Krista Oswalt	8 June 2022	British Journal of Developmental Psychology	USA
29	Children's Effortful Control Skills, but Not Their Prosocial Skills, Relate to Their Reactions to Classroom Noise	Massonnié, Jessica ; Frasseto, Philippe ; Ng-Knight, Terry ; Gilligan-Lee, Katie ; Kirkham, Natasha ; Mareschal, Denis	2022	International Journal of environmental research and public health	FRANCE
30	Draw Me a Picture -Student-Teacher Relationship Drawings by Children Displaying Externalizing, Internalizing, or Prosocial Behaviour	Roorda Zee, Marjolein, Kathleen Moritz Rudasill, and Debora L	2020	The Elementary School Journal	NETHERLANDS
31	Are Real-World Prosociality Programs Associated with Greater Psychological Well-Being in Primary School-Aged Children?	Proulx, Jason D.E. ; Van de Vondervoort, Julia W. ; Hamlin, J. Kiley ; Helliwell, John F. ; Aknin, Lara B	2023	International Journal of environmental research and public health	CANADA

32	The Formation of Prosociality: Causal Evidence on the Role of Social Environment	Kosse, Fabian ; Deckers, Thomas ; Pinger, Pia ; Schildberg-Hörisch, Hannah ; Falk, Armin	2020	The Journal of Political Economy	GERMANY
33	Parenting and White Children's Prosocial Behaviours toward Same-Race and Other-Race Peers: The Moderating Role of Targeted Moral Emotions Family relations	Xu, Jingyi ; Spinrad, Tracy L. ; Xiao, Sonya Xinyue ; Eisenberg, Nancy ; Laible, Deborah ; Berger, Rebecca ; Carlo, Gustavo	Feb 2024	Interdisciplinary Journal of Applied Family Science	USA
34	Consistency of Limited Prosocial Emotions Across Occasions, Sources, and Settings: Trait- or State-Like Construct in a Young Community Sample?	Seijas, Raquel ; Servera, Mateu ; García-Banda, Gloria ; Leonard Burns, G. ; Preszler, Jonathan ; Barry, Christopher T. ; Litson, Kaylee ; Geiser, Christian	2019	Journal of Abnormal child psychology	SPAIN
35	Development of Prosocial Behaviour and Inhibitory Control in Late Childhood: A Longitudinal Exploration of Sex Differences and Reciprocal Relations	Ferschmann, Lia ; Overweg, Ingrid ; Dégeilh, Fanny ; Bekkhus, Mona ; Havdahl, Alexandra ; Soest, Tilmann ; Tamnes, Christian K.	2024	Child Development	NORWAY
36	White Children's Empathy-Related Responding and Prosocial Behaviour toward White and Black Children	Spinrad, Tracy L. ; Eisenberg, Nancy ; Xiao, Sonya Xinyue ; Xu, Jingyi ; Berger, Rebecca H. ; Pierotti, Sarah L. ; Laible, Deborah J. ; Carlo, Gustavo ; Gal-Szabo, Diana E. ; Janssen, Jayley ; Fraser, Ashley ; Xu, Xiaoye ; Wang, Wen ; Lopez, Jamie	2023	Child Development	USA
37	The Effects of a 'Pretend Play-Based Training' Designed to Promote the Development of Emotion Comprehension, Emotion Regulation, and Prosocial Behaviour in 5- to 6-Year-Old Swiss Children	Richard, Sylvie ; Baud-Bovy, Gabriel ; Clerc-Georgy, Anne ; Gentaz, Edouard	2021	The British Journal of psychology	SWITZERLAND
38	Does Affirming Children's Autonomy and Prosocial Intentions Help? A Microtrial into Intervention Component Effects to Improve Psychosocial Behaviour	de Mooij, Brechtje ; Fekkes, Minne ; van den Akker, Alithe L. ; Vliek, Lilian ; Scholte, Ron H.J. ; Overbeek, Geertjan	2022	Journal of School Psychology	NETHERLAND
39	Essentialist Beliefs Affect Children's Outgroup Empathy, Attitudes and Prosocial Behaviours in a Setting of Intergroup Conflict	O'Driscoll, Dean, Laura K. Taylor, and Jocelyn B. Dautel	2021	International Journal of Psychology	UK
40	Children's Physiological Reactivity in Emotion Contexts and Prosocial Behaviour	Coulombe, Brianne R., Kristen L. Rudd, and Tuppett M. Yates	2019	Brain and Behaviour	USA
41	Co-Occurring Trajectories of Direct Aggression and Prosocial Behaviours in Childhood:	Ettekal, Idean, and Minoo Mohammadi	2020	Frontiers in psychology	USA

	Longitudinal Associations With Peer Acceptance				
42	A Developmental Cascade Model of Prosocial Behaviour, Academic Competence, and Peer Exclusion across Preadolescence	Yao, Zhuojun, and Robert Enright	2021	Merrill-Palmer Quarterly	USA
43	Prosocial Skills Causally Mediate the Relation Between Effective Classroom Management and Academic Competence: An Application of Direction Dependence Analysis	Wiedermann, Wolfgang, Wendy M Reinke, and Keith C Herman	2020	Developmental Psychology	USA
44	Prosocial Games for Inclusion: Interaction Patterns and Game Outcomes for Elementary-Aged Children	Parsons, Sarah, Karakosta, Efstathia Boniface, Michael and Crowle, Simon	2019	International Journal of Child-Computer Interaction	UK

Appendix 2: Reference List for Scoping Review

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Appendix 3: Expanded Table of Theoretical Studies within Scoping Review

No.	**Title of study**	**Authors**	**Publication Year**	**Theory of prosocial development (where given)**
1	Student–teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school	Claudio Longobardi, Michele Settanni, Shanyan Lin, Matteo Angelo Fabris	2020	Attachment Theory (Bowlby (1969) – the relational impact on prosociality levels of children
2	Developmental Relations between Children's Peer Relationship Quality and Prosocial Behaviour: The Mediating Role of Trust	Marc Jambon and Tina Malti	2022	Attachment Theory (Bowlby) (1969) – the role of trust with caregivers for the development of prosocial skills
3	The warm glow of kindness: Developmental insight into children's moral pride across cultures and its associations with prosocial behaviour,	Joanna Peplak, Beatrice Bobba, Mari Hasegawa , Simona Caravita and Tina Malti	2023	Social Learning Model (Bandura) (1973) Prosocial as a development need for individual's moral identity for collective good
4	Prosocial behaviour mediates the relation between empathy and aggression in primary school	Pietro Spataro Martina Calabrò Emiddia Longobardi	2020	Social Information Processing model - deficits and biases in processing social cues and empathic concern including perspective taking can act as cognitive precursors in determining children's prosocial levels (source not cited)
5	Journey Around the World Curriculum: Bridging global and prosocial education	Savina, Elena	2020	Social Emotional Development of Empathic Concern in childhood (source not cited)
6	Children's Prosocial and Aggressive Behaviours: The Role of Emotion Regulation and Sympathy	Giovanni Maria, Federica Zava, Elena Cattelino, Antonio Zuffianò, and Susanna Pallini	2023	Multidimensional Model including the development of cognitive processing mechanisms such as perspective-taking to in the development of prosocial behaviours (source not cited)
7	The Impact of Socialisation on Children's Prosocial Behaviour. A Study on Primary School Students	Tintori, Antonio, Giulia Ciancimino, Rossella Palomba, Cristiana Clementi, and Loredana Cerbara	2021	Social Learning Theory (Bandura) (1973) – socialisation processing as a motivator for the development of prosocial behaviours
8	Home Learning Environment and Out-of-home Activities: Their Relations to Prosocial Behaviour and Peer Relationships in Primary School Children	Volodina, Anna	2023	Bronfenbrenner's bioecological model of prosocial development (2005)
9	Developmental Links between Well-being, Self-concept and Prosocial Behaviour in Early Primary School	Dempsey, Caoimhe, Rory Devine, Elian Fink, and Claire Hughes	2023	Seligman (2002); Seligman, Ernst,Gillham, Reivich & Linkins (2009) Positive psychology, focus on 'building positive qualities'
10	A Daily Breathing Practice Bolsters Girls' Prosocial Behaviour and Third and Fourth Graders' Supportive Peer	Von Salisch, Maria, and Katharina Voltmer	2023	Positive Psychology (Seligman, 2000; Seligman & Csikszentmihalyi (2002), - Mindfulness and positive peer relationships' contribution to the development of social-emotional and cognitive skills

	Relationships: A Randomized Controlled Trial			
11	Self-Concept, Prosocial School Behaviours, Well-Being, and Academic Skills in Elementary School Students: A Whole-Child Perspective	Wikman, Carina, Mara Westling Allodi, and Laura Anne Ferrer-Wreder.	2022	A social-developmental approach to self-concept affecting prosocial outcomes and therefore, children construct their self-concept based on the social relationships they have, the feedback they receive, the social comparisons they make, and the cultural values they endorse (Bandura) (1973)
12	Direct and Indirect Associations of Empathy, Theory of Mind, and Language with Prosocial Behaviour: Gender Differences in Primary School Children	Longobardi, Emiddia, Pietro Spataro, and Clelia Rossi-Arnaud	2019	Eisenberg's Theory of Prosociality (2002) and empathic development.
13	On the Importance of Being Agreeable: The Impact of Personality Traits on Prosocial Lying in Children	Demedardi, Marie-Julie, Yannick Stephan, and Catherine Monnier	2021	Eisenberg's Theory of Cognitive development (1983) of executive functions the theory of mind, cognitive empathy, and prosocial development
14	"Individual and Sociodemographic Factors Associated to Prosocial Behaviours and Academic Performance in Portuguese Elementary School Children: Highlights from a National Study After COVID-19 Child Indicators Research	Carvalho, Marina, Cátia Branquinho, Catarina Noronha, Barbara Moraes, Nuno Rodrigues, and Margarida Gaspar De Matos.	2023	Eisenberg's Theory of Prosocial behaviour (2016) and developmental and multi-dimensional model of biological, contextual, and psychological factors, and individual experiences
15	How Popularity Goal and Popularity Status Are Related to Observed and Peer-nominated Aggressive and Prosocial Behaviours in Elementary School Students	Lansu, Tessa A.M	2023	Hawley's (1999) Resource control theory proposes that both coercive and prosocial resource control strategies can bring social dominance and popularity
16	Disentangling Between- and Within-person Associations between Empathy and Prosocial Behaviours during Early Adolescence	Carrizales, Alexia, Susan Branje, and Lyda Lannegrand	2021	1. Empathy as a multidimensional construct. 2. Affective and cognitive empathy are related - a better understanding of others' emotions leads to prosocial behaviour (Cuff, Brown, Taylor & Howat, 2016) 3. Bernstein and David (1982) Cognitive empathy refers to the understanding of another person's feelings and relies on perspective taking or mentalising processes 4. Singer & Lamm(2009) - affective empathy includes sharing similar emotions (emotional contagion) or feeling sorrow or concern for the observed other (empathic concern) and to a lesser extent, emotional disconnection
17	Halo and Association Effects: Cognitive Biases in Teacher Attunement to Peer-	Marucci, Eleonora, Beau Oldenburg, Davide Barrera, Antonius H. N. Cillessen, Marloes Hendrickx, and René Veenstra	2021	Attachment and attunement (Bowlby (1969) Models of teacher attunement when assessing prosocial characteristics

	nominated Bullies, Victims, and Prosocial Students			
18	You Can't Sit with Us…just Kidding! An Investigation into the Association between Empathy and Prosocial Teasing	Platt, Michelle, Christine K. Malecki, Amy Luckner, Kristina Wiemer, and Yoonsun Pyun	2022	Eisenberg's theory of prosocial development (1983) Empathy and Perspective Taking (Cavell 1990) - a tri-component model of social competence operationalizes social competence into three underlying social status – social performance, social skills and social goals. .
19	A Person-Centered Exploration of Peer Aggression and Prosocial Behaviour in Early Adolescence	Hopkins, S. W., A. K. Marks, and G. D. Fireman	2023	Group interaction study of the interplay of cohesion and stress relating to peer aggression and prosocial behaviour
20	Friendship Processes Around Prosocial and Aggressive Behaviours: The Role of Teacher–Student Relatedness and Differences Between Elementary-School and Middle-School Classrooms	Shin, Huiyoung, Allison M. Ryan, and Elizabeth North	2019	Social Learning Theory (Bandura 1977) Behaviours are socialized through such processes as information exchange, modeling, and reinforcement
21	Disaggregating Between- and Within-Classroom Variation in Student Behaviour: A Multilevel Factor Analysis of Teacher Ratings of Student Prosociality and Aggression	Murray, A. L., Obsuth, I., Eisner, M., & Ribeaud, D.	2019	Not given
22	Irritability and Limited Prosocial Emotions/Callous-Unemotional Traits in Elementary-School-Age Children	Waschbusch, Daniel A. ; Baweja, Raman ; Babinski, Dara E. ; Mayes, Susan D. ; Waxmonsky, James	2020	Frick, Ray, Thornton et al, 2014) Levels of irritability in children was significantly correlated with internalizing the absence of emotions that foster prosocial skills.
23	Creating Positive Learning Environments in Early Childhood Using Teacher-Generated Prosocial Lessons	Johnston, Callum B ; Herzog, Teresa K ; Hill-Chapman, Crystal R ; Siney, Caitlin ; Fergusson, Ashley	2019	Social Learning Theory 1. Children seek to belong to and be accepted by social groups (Wentzel) (2003). 2. Children look to significant adults, including teachers, to provide them with models on how to behave in given social conditions and to protect them from those things that, for a child, are scary or harmful, such as aggressive and abusive classmates (Platten, Hernik, Fonagy, & Fearon) (2010).
24	Direct and Indirect Associations of Empathy, Theory of Mind, and Language with Prosocial Behaviour: Gender Differences in Primary School Children	Longobardi, Emiddia, Pietro Spataro, and Clelia Rossi-Arnaud	2019	1. Eisenberg's model of multitude of factors affecting the development and expression of social skills 2. The Socio-Cognitive Integration of Abilities model (Beauchamp & Anderson 2010) prosocial behaviours are determined by a set of cognitive and affective abilities, influenced by internal factors (e.g., temperament or personality), external factors (e.g., family environment or socio-economic

				status), and functions linked to brain development and integrity.
25	Reactive Attachment Disorder Symptoms and Prosocial Behaviour in Middle Childhood: The Role of Secure Base Script Knowledge	Cuyvers, Bien, Eleonora Vervoort, and Guy Bosmans	2020	Attachment theory (Bowlby) (1969) 1. Internal Working Models about attachment mediate the link between reactive aggressive disorder and prosocial behaviour problems in middle childhood (based on mental representations about the care-related interactions with the caregiver) 2. Waters and Waters's basis for secure Internal Working Models and need for a Secure Base Script
26	The Impact of a School-Based Musical Contact Intervention on Prosocial Attitudes, Emotions and Behaviours: A Pilot Trial with Autistic and Neurotypical Children Autism	Cook, Anna, Jane Ogden, and Naomi Winstone	2019	Group processes intergroup contact models of conflict resolution (not cited)
27	Discrepancies Between Teacher- and Child- Reports of Proactive and Reactive Aggression: Does Prosocial Behaviour Matter?	Mildrum Chana, Sofia, Elizabeth C. Tampke, and Paula J.	2021	Bandura's Social Learning Theory (1973) – aggression and prosociality is learned and enacted through the desire to achieve a specific goal
28	Being Helpful to Other-Gender Peers: School-Age Children's Gender-Based Intergroup Prosocial Behaviour	Sonya Xinyue Xiao1 , Carol Lynn Martin1 , Tracy L. Spinrad1 , Nancy Eisenberg2 , Dawn DeLay1 , Laura D. Hanish1 , Richard A. Fabes , and Krista Oswalt	8 June 2022	Eisenberg's Theory of Prosociality (1993) - Young children's prosocial decisions are primarily driven by egocentric concerns
29	Children's Effortful Control Skills, but Not Their Prosocial Skills, Relate to Their Reactions to Classroom Noise	Massonnié, Jessica ; Frasseto, Philippe ; Ng-Knight, Terry ; Gilligan-Lee, Katie ; Kirkham, Natasha ; Mareschal, Denis	2022	Not given
30	Draw Me a Picture - Student-Teacher Relationship Drawings by Children Displaying Externalizing, Internalizing, or Prosocial Behaviour	Roorda Zee, Marjolein, Kathleen Moritz Rudasill, and Debora L	2020	1. Bowlby (1969)'s attachment theory and developmental framework accords a central role to mental representational models, or internal working models, that children acquire and develop through repeated interactions with their primary caregiver 2. Pianta's An attachment theory framework (1999) reflecting a dynamic set of feelings, beliefs, personal attributes, and behaviours of the self, the significant other, and the mutual relationship
31	Are Real-World Prosociality Programs Associated with Greater Psychological Well-Being in Primary School-Aged Children?	Proulx, Jason D.E. ; Van de Vondervoort, Julia W. ; Hamlin, J. Kiley ; Helliwell, John F. ; Aknin, Lara B	2023	Seligman (2002) Positive Psychology suggesting prosociality is a path to greater well-being.
32	The Formation of Prosociality: Causal Evidence on the Role of Social Environment	Kosse, Fabian ; Deckers, Thomas ; Pinger, Pia ; Schildberg-Hörisch, Hannah ; Falk, Armin	2020	Prosocial attachment figures and intense social interactions as two main drivers of child prosociality. 1. Prosocial attachment figures are highly prosocial individuals with a close

				social connection to the child. They enable children to observe and imitate a prosocial role model and thereby internalize prosocial beliefs, preferences, and behaviours (Attachment theory, Skinner 1953) 2. Intense social interactions are joint activities that foster social reinforcement and feedback (Eisenberg, and Fabes 2006)
33	Parenting and White Children's Prosocial Behaviours toward Same-Race and Other-Race Peers: The Moderating Role of Targeted Moral Emotions Family relations	Xu, Jingyi ; Spinrad, Tracy L. ; Xiao, Sonya Xinyue ; Eisenberg, Nancy ; Laible, Deborah ; Berger, Rebecca ; Carlo, Gustavo	Feb 2024	Eisenberg and Padilla (2016) – A Multidimensional theory of prosociality comprising: 1. Cognitive factors (empathy-related responding, emotion regulation) 2. Contextual factors predictive of prosocial behaviours (e.g., parental socialization, teacher–child relationship)
34	Consistency of Limited Prosocial Emotions Across Occasions, Sources, and Settings: Trait- or State-Like Construct in a Young Community Sample?	Seijas, Raquel ; Servera, Mateu ; García-Banda, Gloria ; Leonard Burns, G. ; Preszler, Jonathan ; Barry, Christopher T. ; Litson, Kaylee ; Geiser, Christian	2019	Not given
35	Development of Prosocial Behaviour and Inhibitory Control in Late Childhood: A Longitudinal Exploration of Sex Differences and Reciprocal Relations	Ferschmann, Lia ; Overweg, Ingrid ; Dégeilh, Fanny ; Bekkhus, Mona ; Havdahl, Alexandra ; Soest, Tilmann ; Tamnes, Christian K.	2024	Prosociality and self-regulation may relate to each other in temporally specific ways across development (Eisenberg's theory of prosociality)
36	White Children's Empathy-Related Responding and Prosocial Behaviour toward White and Black Children	Spinrad, Tracy L. ; Eisenberg, Nancy ; Xiao, Sonya Xinyue ; Xu, Jingyi ; Berger, Rebecca H. ; Pierotti, Sarah L. ; Laible, Deborah J. ; Carlo, Gustavo ; Gal-Szabo, Diana E. ; Janssen, Jayley ; Fraser, Ashley ; Xu, Xiaoye ; Wang, Wen ; Lopez, Jamie	2023	The Social Identity Development Theory [SIDT] (Tajfel) 1978) 1. An individual's self-concept is partly derived from their membership in social groups and from the emotional significance that they attach to the group 2. Nesdale's (2004) interpersonal framework for studying the interplay between children's emotions and behaviours toward ingroup and outgroup others.
37	The Effects of a 'Pretend Play-Based Training' Designed to Promote the Development of Emotion Comprehension, Emotion Regulation, and Prosocial Behaviour in 5- to 6-Year-Old Swiss Children	Richard, Sylvie ; Baud-Bovy, Gabriel ; Clerc-Georgy, Anne ; Gentaz, Edouard	2021	Social Learning Theory (not cited) – the development of certain socio-emotional competences, specifically different components of emotion comprehension, will moderate negative emotions, and prosocial behaviour
38	Does Affirming Children's Autonomy and Prosocial Intentions Help? A Microtrial into Intervention Component Effects to Improve Psychosocial Behaviour	de Mooij, Brechtje ; Fekkes, Minne ; van den Akker, Alithe L. ; Vliek, Lilian ; Scholte, Ron H.J. ; Overbeek, Geertjan	2022	Eisenberg's theory of prosociality 1. Engaging in prosocial behaviour requires several socii-cognitive abilities, such as holding a theory of mind, adequate processing of social information, and the ability to effectively regulate emotions

				2. Moral affect theory (e.g., feeling guilt or empathy) and moral cognition (e.g., moral reasoning and perspective-taking) also shape prosocial behaviour (Laible, Carlo, Murphy et al 2014)
39	Essentialist Beliefs Affect Children's Outgroup Empathy, Attitudes and Prosocial Behaviours in a Setting of Intergroup Conflict	O'Driscoll, Dean, Laura K. Taylor, and Jocelyn B. Dautel	2021	Group behaviours and social identity Theory: 1. Empathy may depend on underlying cognitions, such as social essentialist beliefs, that is, believing that certain social categories have an underlying essence that causes members to share observable and non-observable properties. 2. Empathy for salient outgroups can promote positive intergroup attitudes and prosocial behaviours.
40	Children's Physiological Reactivity in Emotion Contexts and Prosocial Behaviour	Coulombe, Brianne R., Kristen L. Rudd, and Tuppett M. Yates	2019	Batson & Powell, (2003), Eisenberg and Faber (1992) Sroufe and Rutter (1984) 1. Basis of problematic and antisocial behaviours. . Core adaptive processes, such as self-regulation, which are thought to influence adjustment in multiple domains, over time, and across the adaptive continuum 2. A framework of developmental psychopathology – a shared set of adaptive systems underlies both positive and problematic adaptation.
41	Co-Occurring Trajectories of Direct Aggression and Prosocial Behaviours in Childhood: Longitudinal Associations With Peer Acceptance	Ettekal, Idean, and Minoo Mohammadi	2020	1. Eisenberg Theory of Prosociality (1992) social-cognitive, emotional and moral development progresses (e.g., empathy, perspective-taking skills), corresponds to prosocial behaviours 2. Children may become more selective in their use of prosocial behaviours, coinciding with either a normative decline or stability across time based on response from others (Hay and Cook 2007, Eisenberg 2015).
42	A Developmental Cascade Model of Prosocial Behaviour, Academic Competence, and Peer Exclusion across Preadolescence	Yao, Zhuojun, and Robert Enright	2021	1. Sociocognitive theory suggesting positive interactions with parents, teachers, and peers create an environment with rich language and social exchanges that promote children's cognitive development (Newman, 1991). 2. Prosocial behaviours promote a supportive peer relationship and teacher–student relationship, which may intensify children's school bonding and create the feeling of security and self-efficacy (Barbaranelli, Caprara, Rabasca & Pastorelli, (2003). 3. Intervention studies have demonstrated that promoting prosocial acts has positive effects on academic development (Caprara , Kanacri, Gerbino et al.) (2014). 4. Bi-directionally, academic competence may influence students' prosocial behaviour as low academic

				achievers may have a negative school attitude, have low self-esteem, and grow isolated from class groups, (Coie & Krehbiel) (1984)
43	Prosocial Skills Causally Mediate the Relation Between Effective Classroom Management and Academic Competence: An Application of Direction Dependence Analysis	Wiedermann, Wolfgang, Wendy M Reinke, and Keith C Herman	2020	Not given
44	Prosocial Games for Inclusion: Interaction Patterns and Game Outcomes for Elementary-Aged Children	Parsons, Sarah, Karakosta, Efstathia Boniface, Michael and Crowle, Simon	2019	Not given

Appendix 4: Expanded theoretical bases within Scoping Review

Theory	Learning Model	Prosocial Development	School implications	Research base
Attachment Theory (Based on work from Harlow, Skinner and Bowlby)	Early interactions provide the young child a way of developing trust in others through attunement between carer and child and creates a secure bond that remains a blueprint for the child's emotional capacity to bond as they develop the capacity to take perspective internalise the capacity to trust others and respond to the needs of others. Insecure attachments form when these young children cannot rely on the carer giver to respond to their needs.	Attachment theory in currently used as a basis to support children who demonstrate insecurity with their relationships with adults. These children are throught to have insecure attachments due to behaviours such as boundary testing and may be hypervigilant. in a classroom setting and outward signs of prosociality influence this perception. However, despite the proactive step of overcoming early difficulties in experience, the original theory would suggest that reforming these early blueprints is challenging and require significant intervention.	For these young people, schools provide responses in small groups where some nurturing techniques are used to increase capacity for relationship building. Teacher perceptions of children's attachments are formed around the child's responses	Experiments were based in laboratory conditions carried out on monkeys and their reactions. In human understanding, attachment theory became a prominent theory based on the communication styles of children from harsh environments with limited interaction in Romania in 1990s. These children were diagnosed as having 'attachment disorder' which limited their capacity, it was found, to communicate and bond. In schools, the disorder was replaced with 'attachment issues' with a causal link between behaviour and early childhood.
Bandura's Social Learning Theory (latterly Socio-cognitive theory)	Bandura described learning as taking place as the child perceives experiences in their environment and model behaviour. When a child watches others, they copy the response when they find themselves in similar situations. This mimicry leads to an internalised cognition that determines choices and one's sense of self, based on experience. The mechanism for the development of all skills, including prosocial skills is about the child's capacity to internalise what they are perceiving and building an internal bank of responses to particular stimuli. Positive or negative reinforcement would lead the child to make choices to use this behaviour, or to alter behaviour.	For a child to become prosocial, the child would need to witness and absorb the positive impact of prosocial action. As a result, prosocial actions may be viewed as a reflection on the child's experience.	teachers or adults have considerable influence or perceive considerable influence over the learner's approach. The child's behaviour and intentions are influenced by experience which in educational terms is of relevance and positive in the underlying notion of change potential. In today's schools can be found in notions of Growth Mindset (an approach where the child understands that 'I haven't learnt it yet' rather than 'I can't do it').	Although supported in experimental design, of children copying angry responses, Bandura's theory presents the child as a generalised child who are born with with similar capacities. There is less emphasis on the individual temperament or cognition. .
Eisenberg's theory of moral reasoning	Cognitive skills including perspective taking develops in through a stepped developmental process. Eisenberg suggests a five-stage model moving from self-centred concerns to the	Based on earlier developmental theories such as Piaget (1928 or Kohlberg (2008) this theory suggests that	Schools take into account external or environmental factors alongside children's	The theory of developmental stages in children are demonstrable in a number of

	development of perspective taking through understanding the 'other' and the formation of moral reasoning.	children do have individual capacities, without which a child's capacity for prosocial motivation is limited Prosociality develops from the child's capacity to understand the needs of others based on their development of empathic concern. Moral reasoning, although similar in its foundations is more often established through questionnaires and perceptions of others (including teachers)..	development, within this theory, can hinder the internal cognitive development.	experimental studies that developmental factors are consistent across cultures and age ranges (for instance, studies of children appearing to demonstrably change in age bands for prosocial actions such as sharing sweets).
Social Identity Theories (including Hawley's Resource Control Theory)	Behaviour is motivated within this set of theories as being based on an evolutionary advantage through mutually advantageous group harmony - based on primitive drivers of behaviour. The need to belong leads us to seek validation from our group to maintain safety (psychological or physical). .	Prosocial action is an activity undertaken to gain acceptance and access to resources. The need to share commonality with our in-groups can result in outgroup hostility. The definition of prosociality within these models removes the need for 'prosocial intent' and suggests that the action (and whether it helps the group) defines prosociality.	In schools, pupils may seek similarities with others to create or bond within a group. For children who feel they are validated and welcome in the class community identification with the teacher and class as a group can take place positively. For children who feel they are outliers, the desire for acceptance may lead them to create their own sub-group for which they can develop the sense of belonging. Likewise, teachers will identify and have attribute more positively to children for whom they feel a degree of commonality, whether the commonality comes from physical appearance, personality traits, background or values which will impact on their perceptions of individual children.	Research studies have found that within human groups and within animal groups, that group membership is desirable and can be based on physical appearance, personality, behaviours. Group studies of behaviour support the notion that behaviour can vary within a group context from interpersonal one-to-one relationships.
Bronfenbrenner's Ecological model	Based on Vygotskian theories of learning, learning potential is not predestined by genes and that learning is influenced by a range of direct and indirect systems that inhabit the child's world. Bronfenbrenner accepts hereditary factors will have a role, but places significant emphasis on environmental impact during childhood to influence achievement and success in social interactions. Several immediate systems will have a clear impact (such as parents) but	Prosociality is developed as a response to environment and external and prosocial behaviour would be a response to learning opportunities and an emotionally safe environment.	Joint systems approaches and school staff understanding of family factors. Barriers to the development of cognitive skills might include attachment issues from early childhood that would need	Support for the theory is found in correlation studies have been found to consistently support the model. However, many learners can overcome very difficult circumstances and there is a concern that this theory could

	the interplay of circles which extend away from the child's direct experience, including the parents' lives away from the child, such as work, and the wider community.		support to 'heal', or environmental Watching prosocial models may increase prosocial behaviour and reinforce its rewards	link difficult backgrounds to limited outcomes due to situational factors

Appendix 5: Measurement tools for included Sample (Expanded Table)

Measure	Details	N = 44 studies	Data Collection
Strengths and Difficulties Questionnaire (Goodman, 1997)	A widely used measure of child adjustment that includes a 5-item prosocial subscale (e.g. considerate of other people's feelings; shares readily with other children; helpful if someone is upset, hurt or feeling ill).	19	Teacher or carer reports
Prosocial Behaviour Scale (PBS) (Caprara, Steca, Zelli, & Capanna (2005)	Children were asked to take part in a semi-structured interview assessing emotional instability, prosocial behaviour and physical/verbal aggressiveness. prosocial behaviour subscale includes 14 items (e.g. "I try to help my classmates," "I happened to caress and embrace my classmates").	3	Self-report
Elementary Social Behaviour Assessment (ESBA) (Pennefather and Smolkowski, 2015)	A 12-item, teacher-rated index of prosocial behaviours at school. The ESBA is rated on a 3-point Likert scale, with high scores indicating more prosocial behaviours and low scores indicative of less-than-typical behaviour. A sample item would be "Works with effort".	1	Teacher report
Revised Peer Experiences Questionnaire (Prinstein Boergers & Vernberg 2001)	Prosocial behaviour measure as three subscales including overt aggression, relational aggression and prosocial behaviour (5 items, e.g., "I stuck up for a kid who was being picked on/excluded"),	2	Self-report
Sociometric measure (qualitative measure aspects of social relationships) (Peery, 1979)	Teacher nominations for their top four students in the areas of intellectual performance, social skills, and those who they felt were well rounded.	1	Teacher report
Children's Social Behaviour Scale (Weir & Duveen 1980)	The CSBS-S is a 27-item measure of relational aggression. Students read a statement (e.g., "Some kids tell a classmate that they will stop being their friend, were then asked How often do you do this?) and rated their behaviour on a 5-point Likert-type scale	3	Self-report
Topper Questionnaire, (Vliek)	Children's prosociality was measured using the 9 item Prosocial behaviour subscale from a Dutch intervention, the 'Topper' programme. The questionnaire measures to what extent children behave in a prosocial manner, feel competent in doing so, and desire to behave in a prosocial manner. An example item is "I help children in my class".	1	Self-report
Big Five Questionnaire French* version (Olivier and Herve, 2015)	The 65-item Big Five Questionnaire for Children in French* (BFQ-C) measures five broad dimensions of personality: extraversion (e.g., I make friends easily), agreeableness (e.g., I understand when others need my help), conscientiousness (e.g., I respect rules and orders), neuroticism (e.g., I lose my calm easily), and openness (e.g., I like to know and learn new things).	1	Self-report
Child and Adolescent Disruptive Behaviour Inventory (Burns and Lee, 2010)	Identification tool for 'Limited Prosocial Emotion' Conduct Disorder includes four measures including lack of remorse or guilt, callous lack of empathy; unconcerned about performance; and shallow or deficient affect. Specific behaviours are given. For example, a child who "does not feel bad or guilty when he or she does something wrong,"	1	Diagnostic Clinician
Social Challenge (Denham, Bouril and Belouad, 1994)	'The 'Challenging situation task-Revised' was translated and adapted. The child must choose a behavioural response from a limited choice of responses to six situations (represented by six images) of physical and social provocation by a peer. Three possible answers are presented using three images that illustrate prosocial, aggressive, or avoiding behaviour. The score corresponds to the number of times the child has chosen a prosocial, aggressive, or avoiding response to the six situations.	1	Task Presenter
Peer nominations (uncited)	Peer nomination items showing you care ("Who asks others how they are doing?") and helping ("Who helps others?"). behaviour, and prosocial behaviour aimed at personal gains, e.g., supporting ideas and decisions of others that may benefit themselves or match their own preference, acting friendly to get a favour.	2	Peer reports
Chocolate, Star and Money sharing observations (House 2012)	Children were asked to make choices in sharing or donating resources with other children (same age and gender but different race). Scores were given for each choice.	2	Scored on behavioural response
Donation task (Grusec and Redler, 1980)	Children were asked to donate coins that they had just been given (for their effort in a test) and then were asked if they wanted to donate to support sick children by placing coins in a jar, whilst the	1	Scored on behavioural response

	adult leaves. Prosocial sharing is indicated by the total number of dimes the child placed in the jar by the end of the visit.		
Social Behaviour Questionnaire (Tremblay, 1991)	Based on the Weir & Duveen PBS, this questionnaire was adapted to individual child response. Prosocial behaviour was measured using 10 items assessing helping, sharing, kindness and conflict resolution (e.g. 'If I saw someone who had been hurt, I tried to help them', 'I invited other children to join in my game', etc.). Participants reported on a five-point scale (1 = not at all like me; 5 = extremely like me).	2	Self-report
Semi-structured Interview designed for study (Parsons, 2019)	For all groups, the researcher introduced the game (The Chase video game) concept to the children and then they played the game. Following game play, there was a 5–10 min discussion about whether children enjoyed playing the game, how they felt about the collaboration with the other players.	1	Self-report
No measure indicated		3	

- Schools in Canada list English and French as official languages and the French questionnaire was used within the context where French is spoken at a level of academic confidence. French assessments were not considered within the studies as a second language but as an official language of the country.

Appendix 6: Prosocial Measurement tools

The Strengths and Difficulties Questionnaire (Goodman)

The questionnaire has five scales, of which one is the prosocial scale and is based on five descriptions that are ticked by teachers and scored on a 'certainly true' 2 points, 'somewhat true' 1 point or 'not true' (0 points).

- Considerate of other people's feelings
- Shares readily with other children
- Helpful if someone is hurt
- Kind to younger children
- Volunteers often to help others

The Prosocial Behaviour Questionnaire (Weir & Duveen 1980 and later adapted by Tremblay for self-reporting 1991)

A questionnaire initially for parents or teachers which asks how often on a 1-5 Likert scale how often a child exhibits comforting, helping and sharing behaviour as follows:

- Willingly shares toys with a parent, even without being asked
- Helps me of his/her own accord when I am looking for something around the house
- Hugs others when they are upset
- Tries to help me with the housework (for example, sweeps the floor, wipes off the table, puts away toys, waters flowers)
- Exclaims "Uh oh!!" (or similar) when he/she realizes that somebody else has a problem (is in trouble)
- Spontaneously offers his/her things to someone who is upset
- Willingly shares toys with other children, when asked
- Picks up something that I have accidentally dropped and hands it to me
- Willingly shares toys with other children, even without being asked
- Willingly shares toys with parent or teacher, when asked

The Elementary Social Behaviour Assessment

The measure consists of 12 items rated on a 3-point scale. Teachers respond to each item scoring: mastery 3) needs improvement 2) and cause for concern 1).

- following directions,
- listening,
- working with effort,
- completing seatwork,
- resolving conflict,
- getting along with others,

- asking for help
- follows rules
- avoids breaking rule even when encouraged by peer
- behaves appropriately out of class
- manages emotions appropriately
- can have normal conversations without becoming hostile
- gets along with peers
- resolves conflicts without adult intervention

The Prosocial Behaviour Scale

A self-report questionnaire with 16 items including:

1. I am pleased to help friends in their activities
2. I share the things I have with friends
3. I try to help others
4. I volunteer to help those in need
5. I help those in need
6. I do what I can to help others avoid getting into trouble
7. I am willing to make my knowledge and abilities available to others
8. I try to console those who are sad
9. I easily lend money or other things
10. I try to be close and take care of those who are in need
11. I easily share with friends any good opportunity that comes to me
12. I spend time with those friends who feel longely
13. I am empathic with those who are in need
14. I intensely feel what others need
15. I easily put myself in the shoes of those who are in discomfort
16. I immediately sense my friends' discomfort

The Revised Peer Experiences Checklist

A self-report from the perspective of their peer group and to what extent they have felt that they have been a recipient of prosocial behaviours.

- Another teen was nice and friendly to me when I needed help
- Another teen helped me when I was having a problem
- Another teen stuck up for me when I was being picked on or excluded
- A teen helped me to join into a group or conversation
- Another teen hung out with me when I had no one else to hang out with.

The Big Five Questionnaire (French variation)

A 65-item questionnaire with a 13-item agreeableness section with the following items to be completed by children on a Likert scoring scale: a 5-point scale the occurrence of the

behaviour reported in the item using a 5-point Likert scale ranging from 1 (=Almost never) to 5 (=Almost always), while elementary school children used a 3-point Likert scale.

1. I share my things with other people;
2. I behave correctly and honestly with others;
3. I understand when others need my help;
4. I like to give gifts;
5. If someone commits an injustice to me, I forgive her/him;
6. I treat my peers with affection; #
7. I behave with others with great kindness;
8. I am polite when I talk with others;
9. If a classmate has some difficulty I help her/him;
10. I trust in others;
11. I treat kindly also persons who I dislike.
12. I think other people are good and honest.
13. I let other people use my things.

The results also include 6 measures designed by the researcher using either data gathering around specific behavioural outcomes (such as how many coins were donated) or were based on locally produced questionnaires not available at the time of this study (such as the 'Topper' questionnaire). A remaining four studies did not provide details of the specific measure used.

Appendix 7: Strengths and Difficulties Questionnaire (Goodman)

Strengths and Difficulties Questionnaire (Goodman)
For each item, please tick the box for **Not True, Somewhat True or Certainly True**. Please answer all items as best you can, following your first instinct.
Please give your answers on the basis of the child's behaviour over the last six months or this school year.
Child's Initials …….
Primary ……..
Male/Female ……

Descriptor	Not true	Somewhat true	Certainly true
Considerate of other people's feelings			
Restless, overactive, cannot stay still for long			
Often complains of headaches, stomach-aches or sickness			
Shares readily with other children (treats, toys, pencils etc.)			
Often has temper tantrums or hot tempers			
Rather solitary, tends to play alone			
Generally obedient, usually does what adults request			
Appears to have many worries, often seems worried			
Helpful if someone is hurt, upset or feeling ill			
Constantly fidgeting or squirming			
Has at least one good friend			
Often fights with other children or bullies them			
Often unhappy, down-hearted or tearful			
Generally liked by other children			
Easily distracted, concentration wanders			
Nervous or clingy in new situations, easily loses confidence			
Kind to younger children			
Often lies or cheats			
Picked on or bullied by other children			
Often volunteers to help others (parents, teachers, other children)			
Thinks things out before acting			

Steals from home, school or elsewhere			
Gets on better with adults than with other children			
Many fears, easily scared			
Sees tasks through to the end, good attention span			

Appendix 8 Prosocial Scale of Goodman's Strengths and Weaknesses Questionnaire

The Strengths and Difficulties Questionnaire (Goodman) Prosocial Scale

	Certainly True	Somewhat true	Not true
Considerate of other people's feelings			
Shares readily with other children			
Helpful if someone is hurt			
Kind to younger children			
Volunteers often to help others			

Appendix 9: Seating Plan

Seating plan

Please circle how the seating in the class is decided.

a) Teacher choice

b) Child choice

c) Other - please explain

…….

Please draw below the desk layout for your class below and show the children's initials in their seat. Please note that the drawings are intended for determining children's groupings when at their desk and there is no requirement for accuracy relating to distances, ratios or other classroom features.

Appendix 12: Qualitative Interview Transcripts (Attributes) and Statement Chart

Transcripts:

Seven respondents with 16 target children (low scoring category on SDQ Prosocial Profile)

{Prompts indicated in transcripts by ? }

Prompts – can you describe what you think the reasons might be for that?

1. *... loves winning - and gets annoyed if he doesn't and says it's not fair. he seems to think he needs to win every time? He likes to be the best a bit superior like think that he's better than everyone? I don't know I mean he's not like the older ones (siblings). That's just him I think, don't think it's his background or anything like that.*
2. *gets annoyed if they don't play with her but doesn't seem to understand – there's not much empathy. I think doesn't like anyone getting more attention he doesn't seem to care about anyone else, always got to be first in the line and annoyed if anyone gets there first so really competitive.*
3. *.....very dominating and can't be talked around - he's not lacking in positive relationship. People are kind and nurturing to him but he doesn't seem to care. It doesn't seem to bother him. He doesn't care but he doesn't really have a friend just now No one is unkind, but everyone is wary of him.*
4. *...doesn't seem too bothered either way. I think he's just like that. I think there is a query about autism but he's not like I would expect. He knows what he's doing and smirks when people get into trouble. I think that' his personality .... likes to be in control*
5. *.... no empathy I try and encourage him but he doesn't seem to care about praise in fact he seems a bit annoyed. ? No idea, can stop it if he's in right mood Don't think there are any boundaries at home.*
6. *He thinks he's an adult. Talks like an adult. Can be a bit. Can be sort of condescending. ?. He likes to be above – think that's his nature. They (? assessment can't remember) but said it was parenting and I'd agree with that*
7. *Dad away a lot says she doesn't like mum but loves dad – spends the whole day (she says) on her own She doesn't like to share. She just grabs things can be a bit*

controlling takes three times as long as others – will go at micro-speed but its deliberate, like control thing ? could be he likes the attention even if it's negative ? I don't think she gets much at home so she'll act up until she gets it – ?– she definitely knows (? she's doing).

8. *He isn't interested in listening to anyone else, just not bothered to try and explain it and he just looks at you and you can see in his eyes that he isn't bothered at all --- he likes winding people up, some people are just like that I don't think he has emotion,*
9. *No empathy I don't think. He is dominating at home too but he knows what he's doing . Parents could have deferred because of his age but they didn't because of their work. The thing is it's deliberate so it's his choice. It's not like he can't help it. Other children try and be nice – he's not like them at all and I don't think he will change. His mum can't get through to him to stop him falling out with people.. But it would be good if he could.(? happier for him as well)l*
10. *They are a handful……bit there are ones that can't help it. But you can talk to them and bring them around. He doesn't seem bothered if you praise him or not ?– I don't know – his mum is nice but I think she lets him away it. He gets anything he wants. But it's the same here it's his agenda or nothing'*
11. *I think he is a bully to be honest. I tried a restorative practice and he just sat and sneered. I can see why the other children don't want to be his friend.. if someone else getting the attention, he doesn't like that' you can't talk him round, some you can but you can't with him – no idea why just think he's like that'Oh he can help it if he wants something yes He's ultra competitive. I don't know – I think he is worried that someone else is getting something. He really doesn't like to share even me. Or his friends and it causes all sorts. '*
12. *He gets different ideas from Mum and dad – (she's)…. very kind and gentle and dad would be authoritative.*
13. *He seems a bit blank inside. Maybe he is autistic but I've had autistic ones before and he's not like them. He can sound a bit monotone mind you. I think he likes it. He can help it yes.*
14. *He can't see things from other people's point of view. ? he doesn't care that's his choice, got to be his way likes to be the boss/definitely control issue'*
15. *The parents don't help I think he gets anything he wants and rules the roost, but he's always watching out and argues back with me.*

16. *'seems to think ..better than them' he doesn't like to see anyone else do well but when I talk to him he says it doesn't bother him, whatever we do/he doesn't care' 'he seems to like when someone hurts themselves like he laughed when a wee toot fell' 'doesn't seem to mind getting told off'*

Qualitative Interview Statements

Statement Chart – Qualitative Interview 1 (Basis of Prosocial Behaviour)
1. *loves winning -* 2. *and gets annoyed if he doesn't a* 3. *always says its not fair.* 4. *he seems to think he needs to win every time* 5. *He likes to be the best* 6. *like think that he's better than everyone* 7. *I don't know I mean he's not like the older ones (siblings).* 8. *That's just him I think, don't think it's his background or anything like that.* 9. *gets annoyed if they don't play with her but doesn't seem to understand –* 10. *there's not much empathy. I think* 11. *doesn't like anyone getting more attention* 12. *he doesn't seem to care about anyone else,* 13. *always got to be first in the line and annoyed if anyone gets there first so really competitive.* 14. *very dominating and can't be talked around –* 15. *he's not lacking in positive relationship. People are kind and nurturing to him but he doesn't seem to care. It doesn't seem to bother him.* 16. *He doesn't care but he doesn't really have a friend just now* 17. *No one is unkind but everyone is wary of him.* 18. *doesn't seem too bothered either way. ? I think he's just like that.* 19. *I think there is a query about autism but he's not like I would expect.* 20. *He knows what he's doing and smirks when people get into trouble.* 21. *I think that' his personality …. likes to be in control* 22. *no empathy* 23. *I try and encourage him but he doesn't seem to care about praise* 24. *No idea, can stop it if he's in right mood*

25. *Don't think there are any boundaries at home.*
26. *He thinks he's an adult. Talks like an adult.*
27. *Can be a bit. Can be sort of condescending.*
28. *He likes to be above – bit superior – think that's his nature.*
29. *assessment can't remember (who) but said it was parenting and I'd agree with that*
30. *Dad away a lot says she doesn't like mum but loves dad – spends the whole day (she says) on her own*
31. *She doesn't like to share.*
32. *She just grabs things*
33. *can be a bit controlling*
34. *takes three times as long as others – will go at micro-speed but its deliberate,*
35. *could be he likes the attention even if it's negative*
36. *I don't think gets much at home so acts up until she gets it –*
37. *she definitely knows (what she's doing)*
38. *He isn't interested in listening to anyone else, just not bothered you try and explain it and he just looks at you and you can see in his eyes that he isn't bothered at all ---*
39. *he likes winding people up. He likes it some people are just like that I don't think he has empathy,*
40. *No empathy I don't think. He is dominating at home too but he knows what he's doing . Parents could have deferred because of his age but they didn't because of their work.*
41. *it's his choice.*
42. *It's not like he can't help it.*
43. *he's not like them at all and I don't think he will change.*
44. *can't get through to him to stop him falling out with people.. But it would be good if he could.? happier for him as well*
45. *They are a handful……..bit there are ones that can't help it. But you can talk to them and bring them around.*
46. *He doesn't seem bothered if you praise him or not I don't know*
47. *his mum is nice but I think she lets him away it.*
48. *He gets anything he wants. But it's the same here it's his agenda or nothing'*
49. *I think he is a bully to be honest.*
50. *I tried a restorative practice and he just sat and sneered.*
51. *I can see why the other children don't want to be his friend..*
52. *if someone else getting the attention, he doesn't like that' you can't talk him round,*
53. *some you can but you can't with him – no idea why just think he's like that'*
54. *Oh he can help it if he wants something yes*

55. *He's ultra competitive.*
56. *I don't know – I think he is worried that someone else is getting something.*
57. *He really doesn't like to share even me it causes all sort of issues*
58. *He gets different ideas from Mum and dad*
59. *(she's)…. very kind and gentle and dad would be authoritative.*
60. *He seems a bit blank inside. Maybe he is autistic but I've had autistic ones before and he's not like them. He can sound a bit monotone mind you.*
61. *He can help it yes.*
62. *He can't see things from other people's point of view. he doesn't care that's his choice,*
63. *got to be his way likes to be the boss/definitely control issue*
64. *The parents don't help I think he gets anything he wants and rules the roost, but he's always watching out and argues back with me.*
65. *'seems to think ..better than them' he doesn't like to see anyone else do well*
66. *but when I talk to him he says it doesn't bother him,*
67. *whatever we do/he doesn't care''*
68. *he seems to like when someone hurts themselves like he laughed when a wee toot fell*
69. *doesn't seem to mind getting told off'*

Appendix 13: Transcripts (Teaching Prosocial Skills)

Eight participating teachers responded to Qualitative Interview Question about how teachers would (or do) teach or promote prosocial behaviours.

Response Chart – Question 2 (Teaching Approaches) Whole answers reproduced.
We do a lot. Regular give reminders and managing then – giving them reminders and trying to make sure they understands /about being kind. *I suppose when things go wrong we try and make sure they empathise if someone is sad/about being kind talking to them and explaining to him why it was wrong. If something happens at playtime we talk about it on the carpet.* *Well we have class rules about fairness and having respect for each other. Not specific – just going through the day and they know the rules. Children are involved in making the rules.* *It's big part of the day - part of the school ethos and being kind to each other is in our school ethos.* *If someone is upset, we talk about how that feels. We teach them to have empathy and inclusive. Most of them are very good.* *We are a nurturing school and we have had a lot of training. We follow Rights Respecting Schools. We are all trained to be nurturing / about having respect for different people and all that* *We are a restorative school use restorative to try and give them an idea about understanding feelings and being empathic- emotion works is used often and the traffic lights. …as part of the health and well-being, we do a lot on understanding emotions and being responsible citizen.* *We do a lot in emotional well-being about understanding feelings and recognising them. We follow the workbooks, they seem to like it. It's also part of the curriculum ?) about understanding feelings.*

Appendix 14: Qualitative Interview Transcripts (Seating Position)

Transcripts (Seating position) – five participants (exclusions for non-teaching selected seating and class teacher without low prosocial rated child) for background on seven target children (target=nearest neighbour)

1. *I asked him where he wanted to (sit) and we made a deal. I asked her and she said yes She's a bit of a chatterbox but he seems to like her or at least she doesn't bother him She's a lovely girl and doesn't bother and he listens to her nattering away.*
2. *She is the quietest wee thing She wouldn't say boo to a goose and they seem to get on fine. she (neighbouring child) gets on with it and ignores him, hard worker*
3. *I actually asked her would she be okay sitting there – but its good for her as well – she stands up for herself. She says she's fine but I'd move her if I thought she wasn't.*
4. *I put (low Prosocial child) her beside (neighbouring child) – thought it might bring (low prosocial child) into the group a bit more (?) she's really kind they are a kind class really*
5. *They don't sit together all day but when they do (low prosocial child) can be annoying, she messes up her stuff but I keep an eye of them. She's patient with her , (neighbouring child) just a lovely girl and doesn't mind*
6. *he tries and takes her stuff sometimes and she's quiet but she doesn't put up with anything (1). if he tries …like to keep the iPad when they share it. She makes me laugh when you see her telling him he has to share. She can stand up for herself*
7. *he fell out with (other child) and was winding people up so I put him at a table of girls and try and see if it would help and so far it's worked fine. There's less bickering. ? they are sensible girls*

Statement Chart :5 teachers (exclusions for non-teaching selected seating and class teacher without low prosocial rated child) for background on seven target children (target=nearest neighbour).

Statement Chart 3 – Qualitative Interview Question 3 (Seating Position)
1. *I asked him where he wanted to (sit) and we made a deal.* 2. *I asked her and she said yes* 3. *She's a bit of a chatterbox but he seems to like her or at least she doesn't bother him* 4. *She's a lovely girl and doesn't bother and he listens to her nattering away.* 5. *She is the quietest wee thing*

6. *She wouldn't say boo to a goose and they seem to get on fine.*
7. *she (neighbouring child) gets on with it and ignores him, hard worker*
8. *I actually asked her would she be okay sitting there – but its good for her as well*
9. *she stands up for herself. Z*
10. *She says she's fine but I'd move her if I thought she wasn't.*
11. *I put (low Prosocial child) her beside (neighbouring child) – thought it might bring (low prosocial child) into the group a bit more*
12. *she's really kind they are a kind class really*
13. *They don't sit together all day but when they do (low prosocial child) can be annoying,*
14. *she messes up her stuff but I keep an eye of them.*
15. *She's patient with her ,*
16. *She's lovely and doesn't mind*
17. *he tries and takes her stuff sometimes and she's quiet but she doesn't put up with anything . if he tries …like to keep the Ipad when they share it.*
18. *She makes me laugh when you see her telling him he has to share. She can stand up for herself.*
19. *he fell out with (other child) and was winding people up so I put him at a table of girls and try and see if it would help and so far it's worked fine. There's less bickering. ? they are sensible girls*