A cluster randomised controlled trial comparing three prevention programmes for anxiety: FRIENDS (CBT), Concentration Programme (PCT) and curriculum as normal SEAL, as delivered to primary school classes in mainstream school

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Abstract

The study compared the outcomes of three programmes for preventing and reducing anxiety symptoms in pre-adolescent children. The aims of the study were to examine common and distinct outcomes achieved through effective implementation of credible but different interventions. Participants were 273 primary school students of which 143 were male (52%) and 130 (48%) female. Whole-class groups rather than individual children were randomly allocated to a cognitive behavioural intervention (FRIENDS CBT), a person-centred intervention (Concentration Programme PCT), or a curriculum as normal condition (Social and Emotional Aspects of Learning SEAL). The intervention involved 10 weekly sessions delivered during personal health and social education classes. ANCOVAS with pre-test scores as covariate showed non-significant difference to anxiety scores between conditions. Secondary outcome measures, coping skill, empathic attitude and self- belief were also non-significant. Further analysis using McNemar's test showed significant reductions to anxiety risk status in each condition. The only significant gender effect was in Concentration PCT, where girls reduced anxiety symptoms significantly less than boys. Thematic analysis of follow-up teacher interview and child focus groups showed teachers and at-risk children shared similar views about aspects of intervention they found most useful. Results of the main analysis were non-significant, although qualitative analysis pointed to the importance of implementation effects in the delivery of school-based intervention.

CHAPTER 1: Introduction

Contemporary health and education strategy recognises the need to provide early and universal mental health services to children in school settings. This is based on evidence showing positive emotional and mental health enhances school learning and social development (Weare & Markham, 2005, Banerjee, 2010). The main drivers of this agenda in England are the Social and Emotional Aspects of Learning (SEAL) programme (DCSF, 2005) and the Targeted Mental Health in Schools (TaMHS) project (DCSF, 2008). The purpose of the SEAL programme is to support the social and emotional wellbeing of all children and young people. It is a whole school approach delivering embedded curriculum activity; targeted work with vulnerable children and ongoing professional development for teachers (Banerjee, 2010; Humphrey, Kalambouka, Bolton & Lendrum, et al., 2008; Humphrey, Lendrum, & Wigelsworth, 2010). SEAL uses developmentally appropriate curriculum materials involving seven key themes delivered in units across each primary school year.

The Targeted Mental Health in Schools Project (TaMHS) is designed to build upon SEAL. It is a government-led project (England) enabling local authorities and corresponding primary care trusts to develop evidence-based models for therapeutic and holistic mental health services in school settings to children aged 5-13 and their families. The SEAL and TaMHS model is based on evidence showing children's mental health needs are best supported by universal provision for all children reinforced by targeted provision for more vulnerable groups (Weare & Markham, 2005). In this context, a vulnerable group could, for example, involve looked-after and accommodated children. This is because looked-after and accommodated children are four to five times more likely than those in the general population to have a mental health disorder (National Institute for Clinical Excellence: NICE, 2008). It could also, for example, involve children displaying mild symptoms of an Axis 1 disorder such as anxiety or depression.

The TaMHS project is aligned with NICE recommendations for the promotion of emotional and social wellbeing in primary schools (NICE, 2008), and applies the same criterion for establishing the process through which interventions work and for whom they work as other areas of mental health delivery, for example, adult mental health services. TaMHS therefore identifies meta-analysis or pooling together of randomised controlled trials (RCTs) as the most rigorous form of evidence

underpinning mental health provision (DCSF, 2008). RCTs involve the random allocation of a clinical population, for example, children with an anxiety disorder, to at least two experimental conditions, one of which is likely to be a no-treatment or placebo control. In this way an intervention is shown to work better than a no-treatment or placebo control. A pooling together or meta-analysis of these RCTs is designed to provide evidence that an intervention, for example, Cognitive Behavioural Therapy (CBT), or a specific intervention type, for example, FRIENDS CBT (Barrett, Lowry-Webster & Turner, 2000) works universally with all children or more selectively with targeted groups of children.

Through this process, interventions can be established in evidence and disseminated to a wide variety of delivery sites. This process often involves a commercial element with interventions protected by copyright and publishing contracts (Dadds, 2001). This means intervention can be widely marketed as best practice in the delivery of school-based mental health services. In alignment with recognised good practice (American Psychological Society, Levant, 2005), TaMHS and other mental health delivery vehicles also acknowledge 'less rigorous' methods for acquiring evidence. These methods might include single-case studies or non-experimental descriptive studies, (TaMHS; DCSF, 2008). However, the most valued evidence underpinning school-based interventions involve controlled trial comparing an intervention group, for example, those receiving CBT, with a waiting list or a group receiving intervention that is not necessarily based on another psychological theory (DCSF, 2008).

A fundamental criticism of designs that don't compare with another theoretically-informed approach, or use control group comparisons only to establish a main intervention works, is that they lack sufficient contrast with which to measure the relative benefits of the main intervention (Spielmans, Pasek, & McFall, 2007). In these circumstances, intervention gains could have resulted from flawed research design rather than the theoretical model/s upon which the outperforming intervention is based (e.g. CBT in FRIENDS). The key question is whether CBT versus a no-treatment or placebo control proves CBT has led to intervention gains, or whether other more common process variables might also be active. These common process variables might include therapeutic relationship or expectancy of participants (Ablon & Jones, 2002; Ablon & Marci, 2004, Wampold, 2001). Additionally, variation in the quality of implementation procedures might also subsequently affect research outcomes (Durlak and DuPre, 2008; Greenberg, Domitrovich, Graczyk, Zins, 2005;

Humphrey et al., 2008). To address some of these problems, recommendations have been made to compare two or more credible interventions together, applying the same implementation procedures to each (Spielmans et al., 2007). In this context an intervention could be considered credible if it was based upon a known psychological theory; used theory based manual guidelines and provided high quality pre-intervention training to delivering practitioners (Spielmans et al., 2007).

This is why the current study has chosen to compare interventions, FRIENDS CBT and Concentration PCT with a curriculum as normal condition, SEAL. This is a useful comparison because both FRIENDS CBT and Concentration PCT are designed to achieve the same aim of reducing children's anxiety symptoms but use different methods of delivery to achieve this. Both these interventions use common implementation procedures and can therefore be legitimately compared against the standard curriculum to measure the additional benefits of each intervention type.

An outline of the main chapters is as follows. Chapter 2 will begin by examining some of the causes for child anxiety disorders and limitations of psychiatric classifications in accurately measuring children's subjective experiences of distress. Chapter 2 will then progress to examine the prevalence of anxiety symptoms in typical child populations and the requirement for universal and early intervention strategy to focus upon prevention of future impairment or disorder. Chapter 2 will then provide explanation as to why particular population characteristics (gender, age, anxiety risk status) are subject to closer scrutiny in this study. The chapter goes on to explain why child self-report is used to measure anxiety symptoms and why it is considered appropriate in this study to view anxiety as a unitary construct rather than as a collection of different subtypes (e.g. social phobia etc). Chapter 3 will go on to explain in more detail the predominance of research practices used to establish evidence-based interventions. Following a review of the CBT literature, Chapter 3 will examine why the majority of intervention studies involve only one credible intervention condition. The chapter will then highlight the tendency for most intervention studies to assume, but not measure, the function of taught coping skills in CBT for child anxiety. The rest of this chapter will examine both the main interventions that are subject to comparison in this study. It will also examine different ways in which interventions can be hypothesised to work. Chapter 4 will overview methods and Chapter 5 and 6 will

review results of the main study and follow up qualitative analysis. The final chapter concludes with a discussion of findings followed by implications for practice and suggestions for future research.

CHAPTER 2: Universal Interventions for Child Anxiety

2.1 Introduction

A significant minority of children experience debilitating worries, mild symptoms or full clinical disorder. The numbers of children experiencing difficulty warrants a focus upon early and universal intervention (for example, anxiety prevention programmes with whole classes of school children). The purpose of this chapter is to examine the extent to which universal early interventions are effective in school settings and to consider ways in which they can be researched.

2.2 The causes of child anxiety disorder

Prior to considering this we must first define and examine the causes of child anxiety disorders. A definition is provided by formal diagnostic systems (Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV; American Psychiatric Association, 1994) and the International Statistical Classification of Disease and Related Health Problems (ICD-10; World Health Organisation, 1992). A research consensus now exists that anxiety disorders are the most prevalent forms of psychopathology in childhood (Dadds & Barrett, 2001; Grover, Ginsburg, & Ialongo, 2005; Kendall, Compton, Walkup & Birmaher et al., 2010; Spence, 1998) with different subtypes more prevalent at different developmental stages (Southam-Gerow & Chorpita, 2007). Current estimates are that between 8% and 22% of children and young people have recognised anxiety disorders (Briesch, Hagermoser Sanetti, & Briesch, 2010). However, other reviews have reported child anxiety prevalence rates ranging between 2.6 % and 42% (Cartwright-Hatton et al., 1999), with the highest prevalence rates reported in a Japanese sample (Sugawara, Mukai, Kitamara et al., 1999). Differences in the reported prevalence of all childhood psychiatric disorders, including anxiety, are thought to result partly from difficulty distinguishing between different disorders, for example anxiety and depression, but also developing comorbidities between different subtypes of the same disorder, for example separation anxiety and social phobia. It is also noted that longitudinal and cross-sectional research designs are more sensitive to psychiaric presentations in real community samples and that current estimates of all psychiatric disorder are too low (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003).

There exist a number of explanatory hypotheses for the causes of childhood anxiety. For example, genetic studies have attempted to identify the effects of inheritance upon symptom

development and prevalence rates. These genetic studies have provided useful information about the modest predisposition of some children to psychopathology (Thapar & Rice, 2006) with some indication from anxiety research that predispositions are to psychopathology in general rather than to discrete anxiety subtypes (Zavos, Rijsdijk, Gregor, & Eley, 2010). Other research has included the longitudinal study of temperamental traits, such as physiological arousal or excessive passivity and shyness in infancy, rendering individuals more vulnerable to anxiety symptoms as they develop and grow (Fong & Geralda, 2005), or the examination of ways in which a child's relationship with their mother (Rubin, Nelson, Hastings, & Asendorpf, 1999; Wood, McCleod, Sigman, Hwang, & Chu, 2003) and / or wider family has contributed to their expectation of consistency and security in social relationships (Bayer, Hiscock, Okoumunne, Price, & Wake, 2008; Hughes, Hedtke, & Kendall, 2008; Phoebe, Moore, Whaley, & Sigman, 2004). Further studies have sought to locate symptom development within a wider societal context implicating, for example, the latent threat of social violence upon increased child prevalence rates (Twenge, 2000).

All of these research strands, including genetics, temperamental traits, family relationships and social environment, provide useful and cumulative information about the causes of child anxiety disorders. As a consequence of these different research strands there is now an emergent understanding of the antecedents leading to anxiety disorders. There is also an increasing recognition that anxiety disorders are relatively common in childhood (Cartwright-Hatton, McNicol, & Doubleday, 2006). Emergent knowledge about the causes and prevalence of childhood anxiety disorders has led to discussion about how best to service the needs of affected children. This debate has contributed to the development of universal early intervention programmes designed to support larger numbers of children in community settings. These programmes are intended to ameliorate current risks as well as prevent future disorder. Understandably, preventative interventions are typically located in school settings most accessible to all children.

2.3 The limitations of psychiatric classification

The delivery of successful universal intervention in schools requires an accurate understanding of how anxiety symptoms present in typical child populations. However, the process of applying psychiatric systems to community samples (e.g., school groups) has been criticised. This

stems from the fact that psychiatric systems were originally devised to categorise and understand clinical symptoms rather than to classify / screen existing populations (Klein, 2009). Criticism is consequently made of studies using an a priori, categorical approach to the collection of data from general populations. These studies are thought to deal insensitively with less typical patterns of symptom (Ferdinand, van Lang, Ormel, & Verhulst, 2006) and thus, perhaps, omit distressed or impaired children from rates of prevalence. Cartwright-Hatton et al (2006) further questioned the use of clinical classification in studies that did not establish an individual's subjective experience of distress or impairment. It was pointed out that children attending a clinic could reasonably be assumed to feel a degree of distress. The same assumption could not similarly be made of children who were identified in community samples as displaying high anxiety. In these settings it would be possible for anxiety screening to identify elevated scores in the absence of subjective distress (Compton, March, Brent, Albano, Weersing, & Curry, 2004). The opposite of this would be the potential exclusion from treatment of children who were very distressed yet failed to meet clinical criteria (Angold, Costello, Farmer, Burns, & Erkanli, 1999). This suggests an exclusive use of psychiatric classification in community samples risks misidentification of at least some of those children needing help (Wampold, Lichtenberg, & Waehler, 2002) and provides an additional reason why universal early intervention in larger group settings is an effective means of delivery, in that it supports all children irrespective of the classification arrived at through screening.

2.4 The importance of treating whole populations

As previously stated, anxiety disorders are the most common childhood psychopathology (see Section 2.2). Another 20 % of children experience debilitating worries that do not meet criteria for clinical classification (Hale, Raaijmakers, Muris, Hoof, & Meeus, 2008). Hence, a significant number of all children experience debilitating worries, mild symptoms or full clinical disorder. Analysis of need should therefore consider diagnosed and also undiagnosed children who are at risk of future impairment or disorder. This is because sub-clinical impairment may form a continuum of severity potentially leading to full clinical disorder (Pine, Costello, Dahl, James et al., 2010).

Among those already diagnosed there exists evidence that early onset leads to persistent symptoms in adolescence (Bittner, Egger, Erkanli, Costello, Foxley, & Angold, 2007) and adulthood

(Goodwin, Fergusson, & Horwood, 2004; Spence, 2001). Those who experience early onset are far less likely to achieve their academic potential and much more likely to experience longer-term occupational difficulties in adulthood (Woodward &Ferguson, 2001). They are also at greater risk of developing comorbid psychopathology in adulthood (e.g. depression) (Barrett & Turner, 2001). This can lead to long-term social problems with impairment adversely impacting family and social functioning as well as employability and economic wellbeing. (Bor, McGee, & Fagan, 2004; Farrell & Barrett, 2007; Greenberg, Sisitsky, Kessler, Finkelstein, Berndt, Davidson, Ballenger & Fyer, 1999) The long-term economic and social consequences of acquiring a childhood anxiety disorder may, therefore, be very damaging. An effective intervention strategy should address this problem by providing support to children at an early point in the development of anxiety symptoms.

Using this criterion, an approach exclusively predicated on delivery of clinical intervention to already diagnosed children may contribute to a situation in which many children who need help are unable to access it (Barrett &Turner, 2001; Cartwright-Hatton et al, 2006; Olfson, Gameroff, Marcus & Waslick, 2003). For example, as few as three in 10 of diagnosed children are estimated to receive any form of intervention (Chavira, Stein, Bailey & Stein, 2004). This is because remediation (i.e., treating very impaired or diagnosed children) is too resource-intensive and limits capacity for timely early intervention with the bulk of those needing support. Furthermore, a failure to provide early intervention can lead to entrenchment of symptoms, thus limiting the success of later clinical intervention (Fonagy, Target, Cotttrell, Phillips, & Kurtz, 2005). These are some of the reasons why increasing attention has been paid to early universal intervention with whole populations of children (Bayer, Hiscock, Ukoumunne, Price, & Wake, 2008).

Universal approaches are, by their very nature, preventative. However, there are also other targeted approaches to preventing future disorder. These approaches are labelled either “selective” or “indicated”. Selective prevention programmes are targeted at children whose risk of developing a future disorder is significantly higher than the average. Indicated prevention programmes are also targeted at discrete groups of children showing signs or symptoms of a disorder but who have not yet met clinical criteria for diagnosis (Mrazek & Haggerty, 1994).

Accurate screening measures are therefore required to target this group-work effectively at those children who risk acquiring a future anxiety disorder or show some current clinical symptoms. However, sample selection can be complicated by the limited prevalence of discrete anxiety subtypes in the general population (Bittner et al., 2007; Ferdinand, van Lang, Ormel, & Verhulst, 2006; Schniering, Hudson, & Rapee, 2000), with some children experiencing more than one discrete subtype of anxiety at the same time (Anderson & McGee, 1994; Kendall, Compton, Walkup, Birmaher & Albano et al, 2010; Spence, 1997, 1998; Spence, Barrett & Turner 2003; Verduin & Kendall, 2003). There are also other children who experience anxiety disorder co morbid with other childhood psychopathology (e.g., depression) (Curry & Murphy, 1995; Kendall et al., 2010; Lahey, Wadman, Hankin, Applegate, Loft & Rick, 2004). This makes it very challenging to accurately assess, treat and evaluate a discrete cohort of children who are presumed to share similar symptoms and require similar intervention. A consequence of the difficulty in accurately targeting those who need help is the issue of false negative and false positive identification, which refers to children either being targeted for intervention when they do not need help or being excluded when they do. (Barrett & Turner, 2001; Barrett, Farrell, Ollendick & Dadds, 2006; Farrell & Barrett, 2007)

As discussed, a way of overcoming these problems is to treat whole populations of children (universal intervention). A universal approach with school-aged children can remove the social stigma associated with more targeted / indicated intervention (Greenberg, Domitrovich & Bumbarger, 2001) by making it part of routine school activity (Barrett & Turner, 2001). This universal approach allows for the treatment of current clinical symptoms, such as risk aversion in anxiety. However, it also supports other more common and non-clinical childhood difficulties: these might include stressful life events, developing better relationships or coping with feelings of isolation. In this way, universal interventions can address specific symptoms as well as more common problems experienced by children in everyday settings such as school (Farrell & Barrett, 2007; Greenberg et al, 2001). The utility of universal prevention is, therefore, one of the main reasons for increasing amounts of research into its effectiveness in universal community samples (Lock & Barrett, 2003).

2.5 The challenges of delivering universal intervention

Some concerns are expressed about the capacity of universal intervention to adequately support those very anxious children who are most at risk (Greenberg et al., 2001) and who are likely to develop or already have developed an anxiety disorder. Concerns about very anxious children are partly addressed by evidence showing that universal intervention helps them to significantly reduce anxiety symptoms (Barrett & Turner, 2001; Lowry et al., 2001) even at longer-term follow-up (Barrett, Vasey, Ollendick & Dadds, 2006). Concerns are further assuaged by recommendations for less distinction being made between indicated, selected and universal intervention in favour of a more tiered and flexible approach (Dadds, 2001). This means a very anxious child could receive several interventions at the same time: for example, they could be part of a long-term universal programme whilst also accessing specialist group work and / or receiving individual one-to-one support. This type of tiered or waved intervention forms the basis of the Social and Emotional Aspects of Learning (SEAL) programme (Humphrey et al., 2008) and the Targeted Mental Health in Schools (TaMHS) project in English schools (DCSF, 2008).

SEAL and TaMHS are based upon a three-wave model. Wave One involves a whole-school strategy including embedded curriculum activity delivered to all children. Wave Two involves small-group specialist support with, for example, children who are at risk of acquiring a future anxiety disorder. Wave Three involves more specialist individual support for a small number of children whose needs are more significant. For example, Wave Three might include support for children displaying symptoms of an Axis 1 disorder such as anxiety (DCSF, 2005, Humphrey et al., 2008). In this model, Waves two and especially three, predicate on the provision of resources additional to those normally delivered in class. Limited availability of additional resources has encouraged the use of more preventative whole-class intervention designed to enhance the universal Wave One and whole-school components of a three-wave model. This frequently takes the form of time-limited intervention extending the social and emotional learning curriculum normally delivered in class.

This type of time-limited universal intervention, for example, FRIENDS CBT, can be subject to a “before-and-after” controlled trial using pre- and post-application measurements. However, there are some challenges in conducting this type of research with school samples. Challenges include the

choice of an assessment battery sensitive enough to measure intervention effectiveness (Farrell & Barrett, 2007) when most children do not display any obvious signs or symptoms of distress (Barrett& Turner, 2001). Research can also be compromised by difficulty engaging schools that have other competing curricular demands made of them. There are also potential difficulties acquiring consent from the parents of participating children (Lock & Barrett, 2003). Further challenges relate to the training of those delivering school-based intervention (e.g., teachers), as they may be suspicious of an approach involving all children. This is particularly the case when their prior experience has exclusively involved targeted delivery to vulnerable children displaying obvious signs or symptoms of distress, for example, bereaved children. This means teachers and other delivering practitioners require encouragement and support to understand the importance of early intervention with all children (Kiscelia, 2001). Pre-intervention training must, therefore, support a pedagogical shift from remediation to prevention and promote an acceptance on the part of teachers that early intervention can prevent future difficulty or disorder even among those who display little or no current symptoms.

Administering teachers will also require encouragement to recognise the value of manual intervention guidelines (the manual is a procedural guide for intervention delivery). This is because the use of manuals encourages consistency of delivery across different sites. This adherence to manual guidelines can be referred to as "intervention integrity" (Perepletchikova, Chereji, Hilt & Kazdin, 2009; Perepletchikova, Treat & Kazdin 2007). It is important to acknowledge that challenges have been made in the general research literature to the assumption that intervention integrity necessarily leads to intervention success (Waehler, Kalodner, Wampold & Lichtenberg, 2000; Weissz, Sander, Durlak & Anton, 2005). These challenges stem from studies showing greater difference between deliveries of the same intervention than between deliveries of different interventions (Crits-Cristoph, 1991; Wampold & Brown, 2005), suggesting that intervention type is not always the most significant contributor to intervention success. The potential for variables other that manual adherence contributing to intervention success has led to recognition in the research literature that lower integrity interventions can sometimes also be effective (Perepletchikova et al., 2007).

Notwithstanding this, studies selecting to apply evidence-based research practices described by Chambless (1996) and Chambless and Hollon (1998) (see Section 3.2) must minimise variance

between different deliveries of the same intervention. Otherwise a study could not assume constancy of delivery and could not, therefore, infer intervention effects specific to intervention type. This would prevent research from showing that an intervention worked between different delivery settings and also prevent future dissemination of evidence-based intervention guidelines. Hence, although it is important to be aware of the shortcoming surrounding assumptions of intervention integrity (i.e., whether or not intervention type is always the most important change agent), it is also important to recognise the value of this assumption to evidence-based research. It is, therefore, important to protect this assumption by implementing appropriate research practices that encourage careful monitoring of overall adherence to manual guidelines (Banerjee, 2010; Durlak and DuPre, 2008; Gillham, Shatte & Reivich, 2001; Greenberg et al., 2005; Humphrey, et al, 2008; Perepletchikova et al., 2007; Perepletchikova et al, 2009). Adherence procedures are easier to apply in controlled clinical settings than they are in diverse community environments such as schools (Cooper, 2010; Pugh, 2010). However, there are recognised ways of encouraging adherence in schools. These include standard pre-intervention training to delivering teachers, self-scaling by teachers of session integrity, summative teacher interviews and direct monitoring of at least some intervention delivery (Dadds, Spence, Holland, Barrett, & Laurens, 1997) (see Sections 4.5.5).

2.6 Population characteristics

In intervention research it is necessary to recognise which population characteristics make participants more or less responsive to intervention delivery. This supports planning of research design and also helps prepare for eventual interpretation of results.

2.6.1 Anxiety risk status. As vulnerable sub-group, anxious children are a useful indicator of intervention success. This is because they have more scope for reducing high level of anxiety (Dadds, Spence, Holland & Barrett, 1997; Dadds, Holland, Laurens, Mullins, Barrett & Spence, 1999; Lowry-Webster et al., 2001, 2003). This recognition has resulted in attempts to categorise children's risk status using self-scaling measures. The Spence Anxiety Scale (1998: SCAS) provides a good example, with a clinical cut-off point of >42.48 (Spence, 1994: SCAS) signifying a higher level of risk. This self-report therefore allows categorisation of children as at either high or low-risk of acquiring a future anxiety disorder. In doing so it allows researchers opportunity to monitor any changes to anxiety risk

status between pre- and post- measures (e.g. Lock &Barrett, 2003). This categorisation of child populations into high- and low-risk groups has helped prevent intervention effects from being inaccurately generalised to less receptive low-risk children. This avoids suggestion that an intervention has worked well in the general population of children when in reality it has only worked well in the population of highly anxious children.

Any interpretation of high-risk children's self-reporting behaviour should also include the potential effects of regression to the mean. This is because high-risk children represent a cluster of outlying scores and are statistically more likely at re-test to gravitate toward the mean. Also, previous research (Spence, 1998) has shown that children reduce self-reported anxiety scores between measures without any intervening intervention. Hence, it is important to monitor separately the performance of high anxiety children whilst at the same time recognising the design limitations introduced by categorisation of the total sample in to low and high-risk groups (see Section 7.3).

2.6.2 Gender. Girls typically self-report more anxiety symptom than do boys (Ishikawa, Sato & Sasagawa, 2009; King, Gullone & Ollendick, 1992; Lock & Barrett, 2003; Muris, Schmidt & Merckelbach, 2005; Spence, 1998; Spence, 2003). They also disproportionately benefit from universal anxiety intervention at 12 and 24-month follow-up (Lock & Barrett, 2003). This is an important point because the ultimate purpose of time-limited preventative intervention is to reduce anxiety symptoms in the short term but also to prevent them in the longer term. This longer-term function is especially important to girls who display an increased risk of acquiring an anxiety disorder as they develop and grow. This can be compared to more stable levels of risk in boys (Hale, Raajmakers, Muris, van Hoof & Meeus, 2008). This evidence shows that girls are more likely than boys to experience pre-adolescent anxiety and are also more likely to benefit from intervention. For these reasons, the performances of girls and boys should be evaluated separately: a failure to do so might inappropriately risk generalising intervention effects from more receptive girls to less receptive boys. This could, again, obscure true intervention effects by overemphasising the value of intervention to boys and underemphasising the value of intervention to girls.

2.6.3 Age and developmental differences. Younger pre-adolescent children are likely to self-report more anxiety symptoms than are older adolescents (Kendall et al., 2010). This can be seen in

comparison between the self-report of children aged 8 to 12 years in Spence's (1998) study and adolescents aged 13-14 years in Spence et al. (2003). This age group difference is also present in school-based intervention studies in which pre-adolescent children benefited more from intervention than older adolescents (Lock et al, 2003; Barrett, Lock, & Farrell, 2005; Barrett et al., 2006). This evidence supports prioritisation of intervention delivery to pre-adolescents aged 9-11 years (Dadds, Spence, Holland& Barrett, 1997). With pre-adolescent children it is especially important to ensure intervention materials are not excessively demanding of their language and literacy skills (Southam-Gerow & Chorpita, 2007). This is especially relevant to Cognitive Behaviour Therapy (CBT) for anxiety, which is based upon the teaching of new cognitive and coping skills (Cartwright et al., 2006; Grave & Blissett, 2004) making it less sensitive to the learning and developmental needs of younger or developmentally delayed children (Bernstein, Bernat, Victor & Layne, 2008). There may also be a gender distinction, in that CBT predicates on verbal learning, an area in which pre-adolescent girls display more capacity than boys (Gurian, Henley, Trueman, 2001; Nikolaenko, Afans'ev & Frolova, 2004). This means that boys in particular may benefit from reduced language demands made of them during social and emotional learning.

A failure to address these concerns leaves CBT open to criticism that it is dependent upon baseline levels of language, literacy and other cognitive skills, thereby preventing younger or developmentally delayed children from deriving benefit (Cartwright-Hatton et al., 2006). A way of minimising this risk is to provide targeted children with additional help during CBT intervention delivery. In practice this might involve the provision of adult support during paper-and-pencil activity or teacher prompting to check pupil understanding. The provision of additional adult support should not compromise adherence to manual guidelines. Importantly, children should still feel able to engage in the intervention and to regulate their disclosure of information even though they might find some of the language- or literacy-based activities more challenging. Therefore, it is necessary for attending adults to provide support in a discrete and sensitive way.

2.6.4 Ethnicity and culture. Child anxiety self-report measures are known to be sensitive to cultural factors (Schniering, Hudson & Rapee, 2000), with differences to anxiety self-report evident in cross-cultural prevalence studies (Essua, Sakano, Ishikawa & Sasagawa, 2004; Mellon & Moutavelis,

2007). However, meta-analysis of intervention studies shows that ethnicity and culture do not typically moderate intervention outcomes (Compton, March, Brent, Albano, Weersing & Curry, 2004), This is because most intervention studies use a sample derived from ethnically and culturally homogeneous populations (Compton et al, 2004). This means ethnic and cultural variables need to be controlled for in heterogeneous samples or in larger prevalence studies. However, there exists limited reason to do so in moderately sized community samples displaying minimal ethnic or cultural diversity. This is why ethnicity and culture were not subject to consideration in the main analysis of this study.

2.7 Measuring anxiety symptoms

In order to conduct evidence-based early intervention it is necessary to establish valid ways of measuring symptoms. There are some key considerations when selecting appropriate measures. Children in this age range will display varied learning and developmental profiles. Assessment should therefore accommodate a wide range of cognitive, language and literacy skills. Another important issue is to ensure that children understand questions in anxiety self-report in the same way that adult researchers understand the questions. Campbell, Rapee and Spence (1996) exemplified this point by showing that children interpreted the word 'worry' in relation to the intensity, as opposed to the frequency, of an aversive experience. Adults, however, equated the word 'worry 'with the frequency of an unhelpful or aversive thought. Outcomes suggested different semantic understandings of 'worry' as a product of developmental differences to underlying cognitive constructs. Hence it is not only sufficient for participating children to understand questions but for their understandings to match those of adult researchers.

In typical development, Stone and Lemaneck (1990) noted that prior to 8-9 years of age children were less able to understand emotions based on internal mental cues while Harter (1990) suggested capacity for introspection did not fully develop until adolescence. This evidence showed typical pre-adolescent children aged 9-11 years displayed an emergent and developing capacity to reflect upon and self-report subjective experiences. This highlights the importance in this age group of selecting appropriate assessment materials and choosing appropriate ways to administer these materials. An effective assessment battery should therefore accommodate all participants irrespective of their cognitive, language and literacy skills. The evidence also shows the importance of using

developmentally sensitive assessment materials that capture shared meaning between researcher and participants. With this in mind, two frequent methods of acquiring assessment information are considered below.

2.7.1 Anxiety self-report. Examples of anxiety self-report derived from adult anxiety measures include the Revised Children's Manifest Anxiety Scale (RCMAS, Reynolds & Richmonds, 1978) and the State Trait Anxiety Inventory for Children (STAI-C; Spielberger, 1973). The use of anxiety measures originally developed for adult populations assumes that anxiety has a constant aetiology throughout the lifespan. However, although there are overlaps between adult and child presentations of anxiety, this is not an accurate representation of developmental influences (Pine et al, 2010). This recognition has led to the development of anxiety self-reports specifically designed for child presentations. An example of a child-specific assessment is the Screen for Child Anxiety Related Emotional Disorders (SCARED, Birmaher, Khetarpal, Brent, Cully, Balach, Kaufman & McKenzie Neer, 1997). The SCARED maps well onto anxiety subtypes described in psychiatric classification (Birmaher et al, 1997). Although used in community settings (Hale, Raaijmakers, Muris, van Hoof & Meeus, 2005), its development in a clinical environment makes it arguably less sensitive to anxiety presentations in community samples and, for this reason; it is less frequently used in these samples.

The Spence Anxiety Scale (SCAS: Spence, 1998) was also developed specifically for children. It was established in a large community sample (N= 2052) and showed children with discrete anxiety subtypes, such as social phobia, responded consistently to relevant assessment items contained within the SCAS. Good discriminant validity within anxiety subtypes showed it could reasonably be expected to identify these subtypes in typical child populations. An exception to this was the subtype "Generalised Anxiety Disorder", (GAD). Potentially this was because GAD showed a less defined set of symptoms whilst there were also concerns that it did not actually represent a discrete subtype of the disorder (Biedel, 1991; Spence, 1997; 2001). Aside from validating most subtypes, the Spence Anxiety Scale, (1998, 2003) has also consistently separated those who experienced anxiety disorders from those who did not (Nauta, Scholing, Rapee, Abbott, Spence & Waters, 2004). It has also displayed good test-retest reliability, achieving a correlation coefficient of .6 for 344 children who were reassessed after six months (Spence, 1998). Further, it has shown good interrater reliability

between teacher and parent (Whiteside & Brown, 2008) and performed well in relation to other measures of anxiety (Birmaher et al, 1997). Other benefits have included better symptom coverage, fewer items and more response choices than similar measures (Whiteside & Brown, 2008). It has also been shown to work similarly well in a number of cultures (Essau, Sakano. Ishikawa & Sasagawa, 2004; Essau, Sasagawa, Anastassiou-Hadjicharlambous, Olaya Guzman & Ollendick, 2010; Mellon & Moutavelis, 2007). On this evidence, the SCAS (Spence, 1998; Spence et al, 2003) presents as a psychometrically robust anxiety measure that can be used reliably to identify intervention effects in community samples (see Section 4.4.1).

Recommendations have been made to triangulate parent, teacher and child anxiety reports (Lock & Barrett, 2003). However, there are concerns that different types of anxiety measure may not tap into the same underlying constructs (Klein, 2009). Variance between parent, teacher and child self-report may result from teachers and parents having a different capacity to conceptualise anxiety / worry from children. For example, adults tend to conceive anxiety / worry in relation to the frequency of aversive thoughts, whilst children's construction of anxiety / worry relates more to the intensity of experience felt in the "here and now" (Campbell et al, 1996). Parents, teachers and children also have different perspectives form which to develop subjective opinions about the prevalence or otherwise of anxiety symptoms. On this issue, it may be argued that children, through introspection, are better placed than adults to report subjectively on their own anxiety symptoms. This is because a partial frame of reference inevitably restricts parent and teacher reports (Wigelsworth et al, 2010). However, the value of child self-report still predicates on whether or not the selected anxiety measure can accommodate children's underlying developmental capacity (Wigelsworth et al, 2010). Hence, the primacy of child self-report is only relevant when assessment is developmentally sensitive.

In considering the available evidence, SCAS teacher and parent reports have shown good interrater reliability (Whiteside & Brown, 2008). However, as discussed, there are more general concerns about a tendency for child and adult scaling to lack consistency. For example, Kendall et al (2010) reported that parents scaled significantly more highly than children on the SCARED anxiety self-report (Birmaher et al, 1997). Hence, the possibility of gathering discordant data between parents, teachers and children was a significant factor in deciding not to use multiple-respondents in the current

study. Another significant factor was the time spent by parents and, especially, teachers in scaling and administrating an anxiety measure. For these reasons it was decided not to triangulate SCAS scores between parent, teacher and child.

Another consideration was whether or not to use more than one type of anxiety measure. This decision was informed by concern in the research literature that different anxiety measures potentially tapped into overlapping but different clinical constructs. The key concern is that translation of diagnostic criteria into different assessment formats risked affecting the underlying clinical constructs subject to assessment (Klein, 2009). This provided the reason to use a single anxiety measure that could be shown, through research, to accurately translate diagnostic criteria into an effective instrument for assessment as, otherwise, the use of several assessments risked producing research evidence that was incoherent and difficult to analyse. Again, in this study, the limited time available to child participants and their teachers also informed this decision.

2.7.2 Structured interview. Structured interviews are used to identify the diagnostic status of individual children. Examples include the Diagnostic Interview Schedule for Children (DISC-R; Shaffer, Schwab-Stone, Fisher, Cohen, Piacentini, Davies, Conners & Reiger, 1983); the Diagnostic Interview Schedule for Children and Adolescents (DIGA; Herjanic & Reich, 1982); and the Anxiety Disorders Interview Schedule for DSM-IV - Child Version (ADIS-IV-C, Silverman & Albano, 1996). The DISC-R and DIAGA assess for a wide variety of childhood disorders including most anxiety subtypes. The ADIS –IV-C focuses primarily upon childhood and adolescent anxiety and is frequently used with anxious children (Dadds & Barrett, 2001), displaying moderate / high agreement between parent and child raters (Rapee, Barrett, Dadds & Evans, 1994).

In the current study the potential to verify an individual's self-reported feelings of distress (see Section 2.3) was a positive reason to consider using structured interview. However, there were also other negative considerations related to the capacity of structured interview to accurately measure symptoms change between different time points (test-retest reliability) (Schniering et al, 2000). Furthermore, structured interview and child self-report frequently lack correspondence (Dadds et al, 1997) and might, therefore, produce inconsistent data that are difficult to analyse. Also, from a more logistical standpoint, interviews are time-consuming and difficult to administer and interpret in

community samples. This is especially the case in moderately sized samples (Spence, 1998). For these reasons interviews were not used in the current study.

2.8 Child anxiety as a unitary construct

The Spence Anxiety Scale: (1998; SCAS) (N > 2000) shows that children respond consistently to SCAS questions designed to identify discrete anxiety subtypes. However, this evidence requires to be viewed in the context of other competing evidence outlining the difficulty in discriminating between different anxiety subtypes (Schniering et al, 2000; Klein, 2009), especially in small to moderately sized community samples of less than 2000 (Ferdinand, Lang, Ormel & Verhulst, 2006). As discussed previously (see Section 2.4), these difficulties might well be a consequence of comorbidity between different anxiety subtypes and between anxiety and other psychopathology. However, another possibility is that high levels of observed comorbidity are the product of a common underlying taxonomy of anxiety in general. This position is at odds with factor analytic research undertaken by Spence (1998; Spence et al, 2003), which indicated discrete problem dimensions that are characteristic of different DSM-IV categories. However, as a counterpoint to this research, Ferdinand et al (2006) have shown that different problem dimensions need not necessarily represent distinct groups of children. Instead of mapping co-occurring symptoms they identified which types of children were more likely to experience anxiety symptoms. They worked on the premise that vulnerable children would vary on the degree but not the type of anxiety symptoms they presented. From this premise they were able to conduct research (N = 2210) evidencing continuous distribution of symptoms spanning more than one discrete sub-type of anxiety disorder. Outcomes were therefore supportive of using an 'any anxiety' rather than 'specific anxiety' approach. This was especially relevant outwith a carefully controlled clinical sample. This suggests that in community samples it is more valid to assess for general measures of anxiety rather than for discrete measures of anxiety subtypes. In summary, there are two key reasons for measuring general anxiety rather than specific anxiety subtypes. Firstly, in the current sample the sample size is too small to accurately detect discrete anxiety subtypes (N<2000) (Ferdinand et al, 2006) whilst a unitary construct is thought to better represent pre-adolescent anxiety symptoms in community samples (Klein, 2009; Schniering et al, 2000)

2.9 Summary

Anxiety disorders are the most prevalent forms of childhood psychopathology and, if left untreated, they can have long-term and damaging consequences for the individual and for society. Most children suffering anxiety disorder fail to receive any form of support. Another 20% of all children experience debilitating worries and might also benefit from receiving some form of support. This is why education and health authorities have striven to promote school-based early intervention designed to reduce and prevent anxiety symptoms. This type of intervention allows more children to receive help and avoids separating those who need help from those who do not. Child self-report is a reasonably robust means of measuring anxiety symptoms in these community samples (although it is better used as a global measure of anxiety rather than a discrete measure of anxiety subtypes). In this type of research it is important to evaluate separately the progress of girls and more anxious children because these groups are more likely to self-report symptoms and benefit from intervention.

CHAPTER 3: Evaluating School-Based Interventions

3.1 Introduction

The following chapter will outline research methods typically used to validate empirically supported school-based intervention. It will highlight a lack of research comparing different interventions sharing similar aims but based upon different psychological theories. It will then describe the interventions subject to comparison in this study. The two main interventions, FRIENDS CBT (Barrett, Lowry-Webster & Turner 2000a, 2000b) and Concentration PCT (Pugh, unpublished, 2009) are both designed to reduce and prevent anxiety symptoms. Although very commonly used, FRIENDS CBT is not the only type of CBT intervention for anxious children. Hence, the following chapter will distinguish between FRIENDS CBT and other variants of CBT for child anxiety. However, in practice, the components used in different variants of CBT for child anxiety are not dissimilar and are based upon a common underlying approach (see Section 3.7). Also, research used to validate different variants of CBT for child anxiety typically shares the same strengths and weaknesses. Criticism generally made of CBT research is therefore frequently applicable to FRIENDS CBT research.

The overall purpose of CBT with child anxiety, including FRIENDS CBT, is to teach children new cognitive and coping strategies designed to help them cope with sources of stress and distress. Unlike CBT and FRIENDS CBT, Concentration PCT is based upon a Person Centred approach to intervention (Rogers, 1951; 1961; 1990) and is non-directive. This means participating children are not taught new strategies but are supported to develop self-awareness and resilience. These two approaches provide a good comparison because they are both grounded in known psychological theory and attempt to achieve the same aim of reducing anxiety symptoms by applying different methods of delivery.

3.2 Empirically supported research practices

In 1993 the American Psychological Association (APA) organised a working party to consider psychological intervention within the managed health care system (American Psychological Association Division 12 Task Force, 1995). The purpose of this group was to manage increasing therapy costs, promote better practitioner accountability and establish a more secure scientific basis for

applied psychological intervention. The chair of the Task Force, Dr. Dianne Chambless, was among those endorsing a set of research practices for establishing the efficacy of specific psychological intervention (Chambless, 1996; Chambless & Hollon, 1998). In this endeavour she advocated the use of a controlled clinical trial to establish whether or not an intervention worked. This was to involve ongoing monitoring and supervision of those delivering intervention. These procedures were designed to ensure manual guidelines were adhered to and that consistency of intervention delivery was assured. Many subsequent studies have involved the use of randomised controlled trial (RCT) to establish that a main intervention has worked better than a control condition.

3.3 Cognitive Behaviour Therapy (CBT)

Most intervention studies for Cognitive Behavioural Therapy (CBT), including FRIENDS CBT, have used the above research practices. This is evident from recent reviews of CBT for child anxiety disorders (Cartwright- Hatton, Roberts, Chitsabesan, Fothergill & Harrington, 2004; Compton, Burns, Egger & Robertson, 2002; Dadds & Barrett, 2001; Farrell & Barrett, 2007). In CBT for child anxiety, efficacy research has provided a source of tested materials that can be used in later studies within community settings (Greenberg et al, 2005). Efficacy research involves the application of exclusionary criteria to screen out those children who do not belong to a target population, for example, those diagnosed with a particular subtype of anxiety. It is therefore directed at a specific clinical outcome, for example, reduction to symptoms of social phobia. Effectiveness research is more typically used with naturally occurring samples and does not apply the same exclusionary criteria as efficacy studies. Hence, the sample population in effectiveness studies are likely to be more clinically diverse, involving broader clinical or non-clinical outcomes (Hogarty, Schooler & Baker, 1997).

Examples of efficacy research for individual CBT treatment include Kendall's (1994) study. In this study, anxiety-disordered children and youths aged 9-13 years were allocated to a 16-week block of individual CBT therapy and compared with a wait-list control. The CBT manual in this study was the Coping Cat Workbook (Kendall, 1994), which focused on recognition of anxiety cues and the development of improved coping strategies in children. Outcomes were evaluated using child self-report, teacher report, cognitive assessment and behavioural observation. Results showed child

participants benefited significantly from individual CBT treatment compared with a wait-list condition.

In a further example of selected group intervention, Dadds et al (1997) screened a total of 1,786 children for anxiety disorders. Following recruitment and diagnostic interview, 128 children were selected and assigned to a 10-week school-based child and parent focused CBT psychological intervention or to a monitoring condition receiving no active intervention. The active CBT intervention used in this study was based on The Coping Koala Prevention Manual (Barrett, Dadds & Holland, 1994) which was identical to an Australian modification of Kendall's Coping Cat Workbook (Kendall, 1990; 1994), known as The Coping Koala: Treatment Manual (Barrett, Dadds & Rapee, 1991). This CBT intervention focused on recognition of anxiety cues and development of improved coping strategies. In this study both CBT and non-CBT intervention conditions reduced anxiety scores at post-intervention, but with 6-month improvement maintained only in the CBT groups. In a further follow up there was no difference between CBT and non-CBT conditions at 12 months with benefits of CBT again apparent after two years (Barrett, Duffy, Dadds & Rapee, 2001).

In similar research, Shortt, Barrett and Fox (2001) conducted a randomised controlled trial evaluating the efficacy of CBT intervention compared against a waiting list control. The manual used in this study was FRIENDS CBT (Barrett et al, 2000a, 2000b). This manual was also based on Kendall's Coping Cat Workbook, (Kendall, 1990, 1994). FRIENDS CBT retained the core CBT strategies for anxious children, including controlled exposure to fear-inducing stimuli, relaxation, cognitive strategies and coping skills. However, FRIENDS CBT recognised the developmental needs of children by generating both a child and adolescent manual. It also allowed for the possibility of conducting additional family-based work and emphasised the importance of peer-to-peer support. In this FRIENDS CBT study, children aged 6–10 years (N=71) who fulfilled diagnostic criteria for social anxiety disorder, generalised anxiety disorder or social phobia were allocated to either FRIENDS CBT or to a wait-list control. At post-intervention and again at 12 month follow-up FRIENDS CBT had significantly reduced and prevented anxiety symptoms.

Other selective efficacy research for CBT has involved comparisons between CBT and CBT + family intervention (Barrett, Dadds, Rapee & Ryan, 1996; Barrett, 1998; Barrett, Duffy, Dadds &

Rapee, 2001; Bernstein, Bernat, Victor & Layne, 2008; Kendall, Gosch, Hudson & Flannery-Schroeder, 2008; Suveg, Hudson, Brewer, Flannery-Schroeder, Gosch & Kendall, 2009). For example, Barrett et al (1996) conducted a study with children aged 7 to 14 (N=79). Children who fulfilled diagnostic criteria for separation anxiety, overanxious disorder or social phobia were randomly allocated to one of three intervention conditions: CBT, CBT + family management or a waiting list control. All children in CBT and CBT+ family management conditions received the Coping Koala workbook (Barrett, Dadds & Rapee, 1991). The efficacy of this intervention was evaluated at 12 and 24 months and showed that both CBT conditions reduced anxiety symptoms more than the wait-list control, with some added benefits for the CBT+ family intervention. In another example, Bernstein, Bernat, Victor and Lane (2008) randomly assigned a sample of 61 school children to group CBT, group CBT plus parenting or to a no treatment control. The two CBT groups involved FRIENDS CBT and an expanded version of FRIENDS CBT + family involvement. At three-, six- and 12-month follow-up, parent, child and clinician reports were used with semi-structured interview. In common with most CBT research, Bernstein et al (2008) showed family involvement + FRIENDS CBT provided marginal benefits when compared with FRIENDS CBT alone, whilst all FRIENDS CBT showed significant benefits when compared with a waiting list or no treatment control (Barrett, 1998; Bernstein et al, 2008; Kendall et al, 2008; Suveg et al, 2009).

Some efficacy studies for CBT have compared individual with group variants of the approach (Manassis, Mendlowitz, Scapillato, Avery, Fiksenbaum, Freire, Monga & Owens, 2002; Suveg, Hudson, Brewer, Flannery Schroeder, Gosch, Kendall et al., 2009). Outcomes have tended to show that group CBT is equally effective as individual CBT. For example, Kendall et al (2008) compared individual CBT with family-based CBT and a non-CBT intervention known as Family Education Support Attention with children aged 7-11 years (N=161). Both CBT conditions used the Coping Cat Workbook for anxious children (Kendall & Hedtke, 2006) and were reported to perform better than the non-CBT intervention in reducing anxiety symptoms. However, Suveg et al (2009) later showed that all three conditions - individual CBT, family based CBT, family education & support - had performed equally well on measures of secondary change, including mother and father reports of their child's behaviour at home and social functioning (for example, active participation in hobbies, etc.).

Further studies have sought to establish the effectiveness of CBT in community settings with universal samples of children. Several of these studies have sought to examine the effectiveness of FRIENDS CBT as a preventative intervention delivered by teachers to whole classes of school children (Barrett et al, 2001; Lock & Barrett, 2003; Lowry-Webster et al, 2001; 2003). For example, in Barrett et al (2001), children aged 10-12 years (N=489) were assigned to one of three conditions: a psychologist-led FRIENDS CBT intervention, a teacher-led FRIENDS CBT intervention or a standard curriculum monitoring condition. Participants in both FRIENDS CBT intervention conditions reported fewer symptoms of anxiety at post-intervention than participants in the usual care condition. This research indicated that teachers in the classroom could deliver FRIENDS CBT effectively. This is an important point because it suggested that psychological intervention could be delivered equally well by practitioners with different standards of previous professional training.

From the previous studies we can see that CBT and, specifically, FRIENDS CBT have typically fulfilled criteria for establishing the efficacy of psychological intervention (see Section 3.2). However, a fundamental criticism of most CBT and FRIENDS CBT studies is that they have not provided sufficient evidence to prove that CBT and FRIENDS CBT components have actually led to intervention gains (Jensen, Weersing, Hoagwood & Goldman, 2005; Prins & Ollendick, 2003; Klein, 2009). Furthermore, without a credible comparison condition, intervention gains could be alternatively explained by other more common process variables. These might include, for example, therapeutic relationships or expectancy of participants (Ablon & Jones, 2002; Ablon & Marci, 2004; Wampold, 2001).

To address this methodological concern recommendations have been made to compare CBT or FRIENDS CBT with other credible interventions (Jensen et al, 2005; Prins & Ollendick, 2003). This necessitates determining the criteria used to describe an intervention as either credible or non-credible. Spielmans et al (2007) tackled this issue by drawing up a set of evidence-based criteria. They argued that credible interventions required delivering practitioners to have obtained appropriate qualifications and to have received appropriate training. For example, comparison between two interventions would be inappropriate if one had been delivered by an experienced Educational Psychologist with knowledge of assessment protocols whist the other had been delivered by an

inexperienced para-professional (e.g., a teaching assistant) with little or no knowledge of assessment protocols. This would inflate the risk that intervention effects were the product of difference between administrators rather than between interventions. Spielmans et al (2007) also claimed that therapeutic competency was required to deliver intervention flexibly whilst at the same time adhering to intervention guidelines. It was lastly noted that all credible intervention should be based upon a known psychological model using theory-based manual guidelines.

On this basis, Spielmans et al (2007) conducted a meta-analysis aggregating results of studies in which CBT interventions were compared with other credible / bona fide interventions (including other CBT intervention) or with non-bona fide interventions. The difference between bona fide interventions as well as between full (i.e., CBT+ parent training) versus component treatments (e.g., CBT only) was examined. The results showed that CBT was, indeed, more efficacious than non-bona fide intervention. CBT was not, however, any more efficacious than bona fide non-CBT intervention, whilst differences between bona fide interventions were homogeneously distributed around zero. This evidence suggests that well delivered theory-based interventions produce similarly positive outcomes irrespective of intervention type. By extension, this research also suggests the predominance of CBT and FRIENDS CBT may result from an over-reliance upon replicated efficacy trials in which CBT and FRIENDS CBT are the only credible / bona fide intervention.

3.4 Comparison of CBT with other credible interventions

For these reasons the design structure of comparative studies in which only one CBT or FRIENDS CBT condition is credible (Spielmans et al, 2007) remains vulnerable to bias. From this perspective research studies are flawed if only one intervention condition has been based upon a known psychological theory and where only one set of administrators has received standardised training on manual guidelines. This is because grounding in a known psychological theory (e.g., CBT) provides a clear expectation of how and why an intervention should work. This is communicated to participants and informs overall expectancy (Spielmans et al, 2007). In studies subject to these criticisms the performance of CBT or FRIENDS CBT might have little to do with the cognitive behavioural model upon which these interventions are based. It might simply mean that CBT or

FRIENDS CBT has been more thoroughly planned and better delivered than the non-CBT comparison (Kazdin, 2002; Weersing & Weisz, 2002).

In response to these criticisms attempts have been made to 'strip out' any residual CBT components from CBT comparisons whilst still ensuring that high standards of pre- intervention training and manual adherence apply (Hudson, Rapee, Deveney, Schniering & Lyneham, 2009; Kendall et al, 2008). The purpose of removing CBT components from a comparison condition is to isolate the pure effects of CBT. However, it is not easy to delineate for research purposes one intervention from another. This is because theoretical distinctions between CBT and non-CBT are not always reflected in practical intervention delivery (Ablon & Marci, 2004). Hence, non-theory based interventions might sometimes use strategies and methods, such as talking, listening and coaching, that are similar to those used in theory-based intervention. For example, the intervention labelled "non-CBT" in Kendall et al's (2008) study, Family Education Support Attention, was later independently rated as comprising 65% CBT components (Suveg et al, 2009). A means of achieving better comparison is, therefore, to ensure both comparative interventions are 'credible' but also different from each other, otherwise comparative interventions may well converge upon similar methods of delivery (Suveg et al, 2009).

Addressing this issue means producing a research design in which comparisons to CBT or FRIENDS CBT offer a genuine alternative to the CBT method and are also grounded in a known psychological theory using standard training with manual guidelines (Gillham et al, 2001; Jensen et al, 2005). Good research practice should also involve the use of an, 'as normal control' condition. The purpose of this control would be to distinguish common intervention effects from other non-specific effects (e.g., Horowitz, Garber, Ciesla, Young & Mufson, 2001; Kendall et al, 2008; Suveg et al, 2009) such as the passage of time (Lowry et al, 2001). When comparing two credible interventions an expectation of similarly positive outcomes (e.g., Stiles, Barkham, Twigg, Mellor-Clark & Cooper, 2006; Suveg et al, 2009) should provide added incentive to study the different ways in which interventions might work (Gillham et al, 2001). This affords an opportunity to draw a realistic distinction between interventions and informs future intervention selection. This type of study design is preferable to those comparing CBT or FRIENDS CBT with a no-treatment, wait list, or non-credible

intervention in which outcomes perhaps inaccurately validate CBT or FRIENDS CBT and, by extension, the cognitive behavioural model upon which they are based (Jensen et al, 2005; Prins & Ollendick 2003; Weersing & Weisz, 2002).

3.5 Researching common and distinct outcomes

The different ways in which child psychological intervention achieves outcomes are infrequently researched (Prins & Ollendick, 2003; Kazdin & Knock, 2003; Weersing & Weisz, 2002). This has led to recommendations for future research specifying potentially different ways in which interventions work. For example, Lock and Barrett (2003) measured coping skills both before and after FRIENDS CBT. This research showed at post-intervention that coping skills increased and anxiety symptoms decreased. This is a useful approach and practical to administer in sizeable community samples. However, this study could be criticised for restricting measurement of secondary change to coping skills in the absence of credible comparison between conditions. This provided limited discrimination between effects specific to CBT from those common to all credible intervention (Prins & Ollendick, 2003; Weersing & Weisz, 2002). Hence, we might ask ourselves whether or not another credible intervention might also have helped children improve coping skills. To address this issue it would be necessary to involve more than one credible intervention and to identify outcomes examining similarity and differences between conditions.

The current study will, therefore, attempt to compare more than one credible intervention and to measure intervention outcomes both common and distinct to each intervention. Horowitz et al (2007) provided an example of this design by randomly assigning participants (N=380) to a CBT condition, an interpersonal psychotherapy (IPT) and skills training programme and a no-treatment control. This prevention research for adolescent depression recorded significant and comparable reduction to symptoms of depression in both active intervention groups (effect sizes were .89 and .84 for CBT and IPT respectively). The study also specified and measured several other secondary outcomes including attributional style, coping and perceived quality of parent-–child relationship. However, the only significant changes between pre- and post- measures were to attributional style. This design provided a template for future research measuring common as well as distinct outcomes (De Los Reyes & Kazdin, 2008; Jensen, Weersing, Hoagwood &Goldman, 2005; Kazdin & Knock,

2003; Weersing & Weisz, 2002). In conducting this type of comparison it was necessary to firstly establish a credible non-CBT intervention and to then hypothesise outcomes subject to measurement.

3.6 Establishing credible comparison between FRIENDS CBT and Concentration PCT

A potential barrier to direct comparison between FRIENDS CBT and Concentration PCT relates to the different underlying paradigmatic assumptions upon which they are both based. CBT is underpinned by a philosophical view of science and practice assuming an optimal and objective standard that can be best achieved through manual and replicable treatment. In contrast, PCT is predicated upon the subjectivity of individual experience and consequent variability of intervention delivery. This commitment to the variability of intervention delivery has made it difficult to validate PCT intervention using empirically supported research practices described by Chambless (1996) and Chambless & Hollon, (1998). As a consequence, PCT has been commonly used (Kirschenbaum & Jordan, 2005) yet infrequently established in efficacy (Harris & Pattison, 2006). Concentration PCT has attempted to overcome these difficulties by using manual intervention guidelines that can be consistently administered between settings. Standard training and treatment delivery mean that Concentration PCT can be subject to a controlled comparison with FRIENDS CBT.

3.7 Universal FRIENDS CBT

As discussed (see Section 3.3), the FRIENDS CBT package was adapted from an already existing CBT protocol designed to support anxious children (Coping Cat: Kendall, 1994) (see also Section 3.3). The school-based application of FRIENDS CBT (Barrett et al, 2000a, 2000b) is a ten-session programme of work delivered by schoolteachers as part of the normal curriculum. It is a taught programme designed to develop cognitive and behavioural coping skills and is based on the understanding that cognitive, behavioural and physiological factors interact to maintain anxiety symptoms.

3.7.1 Components of FRIENDS CBT. In order to understand fully the FRIENDS CBT intervention it is necessary to gain an understanding of the cognitive-behavioural treatment paradigm (Beck & Emery, 1985) upon which it is based. This model of treatment emphasises the importance of thinking through problems and adapting behaviour. CBT for anxiety (Beck, 1976, 1991) is held to involve psycho-education, somatic management, cognitive restructuring, problem solving and

exposure and relapse prevention (Kendall, 2004; Miller, 2008; Velting, Setzer & Albano, 2004). Psycho-education is considered to increase children's understanding of anxiety symptoms. Through intervention, children are brought to an understanding that anxiety is a natural response. They are taught that anxiety can protect them from harm as well as motivate them to achieve goals. From a position of acceptance they are taught that normal levels of anxiety can escalate and lead to impairment. This information is considered to provide a context in which avoidance; escape and unhelpful thinking can be explained as ways in which anxieties are maintained. The term 'avoidance' refers to the tendency for children to stay away from the source of their anxieties. The term 'escape' refers to the tendency for anxious children to exit from situations that illicit threat (Velting et al, 2004). Thinking that is automatic and negative is considered to maintain these maladaptive strategies.

Taught skills in CBT collectively target physiology, bodily responses, beliefs and attitudes. Children are encouraged to develop practical skills and techniques to break cycles considered present between physiology, cognition and behaviour. As part of this process somatic management techniques are taught. These tend to involve deep breathing and progressive relaxation. Relaxation techniques are designed to suppress autonomic responses and to support practical problem solving. In this way children are encouraged to appraise anxiety-inducing circumstances calmly. This involves processes of cognitive restructuring, the intention of which is to challenge habituated negative thoughts and to produce more plausible alternative explanations for negative events. Once children learn to produce alternative explanations and solutions they are encouraged to use a framework for positively testing these. Ongoing and graduated exposure to anxiety-inducing stimuli is thought to then mediate the success of CBT training (Kendall, Robin, Hedtke, Suveg, Flannery Schroeder & Gosch, 2005). It is argued that graduated exposure in CBT underpins changes to children's thoughts about fear (Kendall & Treadwell, 2007; Treadwell & Kendall, 1996) and capacity to use learned coping skills (Kendall, Flannery-Schroeder, Panicheli-Mindell et al, 1997). A final component in CBT treatment for anxiety involves ongoing top-up, which is designed to prevent relapse and involves a regular revisiting of learned skills in order to ensure they are not disregarded (Miller, 2008; Velting et al, 2004).

3.8 Concentration Programme

The person-centred Concentration Programme (Pugh, 2009, unpublished) provides a useful comparison with FRIENDS CBT because there are clear theoretical differences between the two. These theoretical differences become manifest in quite different methods of delivery. A person-centred intervention paradigm (Rogers, 1951, 1957) is non-directive and emphasises the importance of empathic communication to therapeutic gains (Barrett-Lennard 1993; Barrett-Lennard 1995; Mearns, 1997). Non-directivity means that the person delivering the intervention does not typically offer advice. Instead, they facilitate open communication with the person or people receiving intervention. Intervention gains are thought to develop primarily from increased self-awareness and acceptance acquired from experience of empathic relationship.

Justification for using the Concentration Programme arises from the alternative way in which it theorises child anxiety intervention. In order to examine this issue we can firstly explore some criticism of CBT and FRIENDS CBT for child anxiety. The primary criticism is that common cognitive behavioural interventions risk over-managing children's emotional experience. The concern is that children in CBT and FRIENDS CBT become coached to a point where they risk losing awareness of troubling experience. The risk of reducing experience to awareness is thought to render children more vulnerable to the continued use of maladaptive coping strategies. In the general literature this has led to recommendation for intervention that attempts to raise experience to awareness rather than primarily focusing on taught coping (Amstader, 2008).

Awareness-raising applications have usefully developed from within an adult cognitive treatment paradigm (Grossman, Niemann, Schmidt & Walach, 2004) and have focused on self-management of attention through learned technique. In these intervention programmes attention deficits are considered a core symptom of anxiety and attention control is considered a method for alleviating these symptoms. Participants are consequently taught to pay attention to the present moment and to establish a more fluent and non-judging awareness of their immediate physical and emotional experience (Thompson & Gantlett-Gilbert, 2008).

Despite promising feedback from child mindfulness programmes there exists limited research in these areas (Semple, Reid & Miller, 2005). This has led to recommendations for future child

research involving controlled trials (Semple et al, 2005; Thompson & Gantlett-Gilbert, 2008). In a feasibility study of cognitive-mindfulness training for children, Semple et al (2005) described a process whereby children were guided to raise awareness of taste, touch, smell, etc., and were afforded opportunity to communicate emotional experiences to their classmates. At post intervention children showed improvements to behaviour and achievement. The developmental appropriateness of interactive, experiential activity was acknowledged, as was the importance of time-limiting treatment. It was concluded that mindfulness training might potentially reduce anxiety symptoms in children.

There are clear overlaps between emergent cognitive-mindfulness training (e.g., Semple et al, 2005) and Concentration PCT (Pugh, unpublished, 2009). This is despite each approach having developed from a different intervention paradigm. A main conceptual difference is that cognitive-mindfulness applications involve targeted training whilst person-centred applications do not. Hence, in cognitive-mindfulness intervention children are taught to be mindful in order to better identify and regulate troubling emotional experience. Concentration PCT is different in so far as therapeutic experiences are facilitated rather than directed or taught. Hence, therapeutic drawing and bodily awareness are hypothesised to indirectly activate associative processes considered to enhance mindfulness and acceptance. These applications are indirect and share commonalities with, for example, stress reduction using repetitive movement and bodily awareness (e.g., Tai Chi with pre-adolescents (Wall, 2005)). That is, intervention components are repetitive, interactive and experiential whilst direction is not offered on the core purpose of intervention, which is the development of mindfulness and reduction of anxiety symptoms.

3.8.1 Measures of change. An examination of commonalities and distinctions between shared intervention applications in cognitive mindfulness and PCT is beyond the scope of this study. For our current purposes there exists a conceptual basis to compare a non-directive PCT intervention focusing on self-awareness and acceptance with a directive CBT intervention focusing on taught cognitive and behavioural coping strategies. In the Concentration Programme, person-centred principles and mindfulness and acceptance applications have been used to focus on the following:

3.8.1.1 Classroom relationships

This section of the Concentration Programme was designed, in part, using both person-centred (Cornelius-White, 2007) and resilience research (Doll, Kurien, Le Clair, Spies, Champion & Osborn, 2009) establishing the quality of classroom relationship as a key predictor of pupil functioning. Implicit is an expectation that the social and emotional competencies of the teacher influence the social and emotional functioning of pupils (Jennings & Greenberg, 2009). The teacher's capacity to model intervention applications is considered to be of central importance. This places a considerable value on the interactive and experiential quality of pre-intervention training. It is intended that, through training, teachers should learn how to facilitate and guide rather than simply teach mindfulness and acceptance. An analogy can be drawn between this function and that of a swimming instructor, where it would be clearly insufficient to describe the theory of swimming without being able to actually swim (Thompson et al, 2008).

3.8.1.2 Bodily awareness

Bodily awareness in Concentration PCT is non-directive and intended to develop a 'felt sense' or pre-verbal awareness in the body. This approach to focusing on felt sense has developed within the adult literature for humanistic, experiential psychotherapy. The purpose of focusing on 'felt sense' is to help individuals raise awareness of self during therapy (Gendlin, 1981). In the current context the term 'felt sense' relates to preverbal awareness given expression in bodily awareness exercises and therapeutic drawing (see Section 3.8.1.2). This approach is, in theory, distinct from relaxation in FRIENDS CBT, in which children are taught somatic management such as breathing techniques. The distinctions are that somatic management techniques in FRIENDS CBT suppress autonomic responses and offer cognitive distraction. Through this process children are taught to remain calm and to appraise anxiety-inducing circumstances more rationally. In Concentration PCT this is not the function of bodily awareness: instead, the function is to facilitate self-acceptance and self-awareness. Becoming more aware of bodily feelings and felt sense is encouraged despite the prospect that children might become aware of felt senses that are challenging rather than relaxing. It is the purpose of adults delivering intervention to manage this process. This is an important distinction as bodily awareness in Concentration PCT and relaxation in FRIENDS CBT are applications most

vulnerable to overlapping intervention effects (Suveg et al, 2009). This is because they both potentially tap into generic therapeutic gains associated with relaxation. These gains have been identified in different intervention applications (Lohaus & Klein-hebling, 2000).

3.8.1.3 Self-expression through drawing

The therapeutic benefits of drawing have been evidenced in a number of studies originating from different theoretical backgrounds (Emanuel, 2006; Lownau, 1969; Rotter, Horak & Heidt, 1999; Turner, 2001). In Concentration PCT, therapeutic drawing is not considered a medium for therapist interpretation or analysis. Instead, it is intended to be a developmentally appropriate opportunity for children to symbolise and spontaneously express experience (Behr & Becker, 2002). It remains unimportant for the facilitator or even the child in question to comprehend literal meaning from the drawing activity. Hence, there is a permissive element to drawing where children gradually learn they do not have to reproduce conventional images, for example, people or houses, and that they are permitted to draw in shapes and colours not necessarily recognisable to others or even to themselves. In the wider person-centred literature, Concentration PCT is informed by the work of Barrett-Lennard (1993) and Mearns and Thorne (2000) in the use of metaphor and imagery as a therapeutic medium. Gendlin's (1981) work on 'focusing' as applied to intervention with classes of school children (Conway, 1997; Stapert, 1997) has also provided a central reference point, describing a graduated process of awareness, increasingly symbolised and expressed through drawing activity. This is considered to involve weekly practice moving from drawing of benign emotions or experiences to the drawing of emotions that are perceived to be more threatening or difficult. Children's capacity to perceive and communicate is considered to increase through practise of drawing activity.

3.9 Secondary outcomes in CBT and PCT

In addition to measuring any changes to self-reported anxiety symptoms the current study will also measure other outcomes considered common and distinct to each. These additional outcomes were selected using the theoretical basis underpinning each intervention type. This is considered a reliable method for selecting variables to measure (Gillham et al, 2005). This approach provides a rationale for identifying potential similarity and difference between Concentration PCT and FRIENDS CBT. These measures are described below.

3.9.1 Coping skill. In FRIENDS CBT children are taught cognitive coping skills they can use to alter maladaptive ways of thinking and behaving. Positive coping has been identified as a protective factor in child anxiety (Spence, 2001) and Donovan and Spence (2000) noted that children who used a cognitive or problem-focused coping strategy were considered to confront or minimise the source of their problem. This optimal coping style could be compared to less effective coping styles that involve attempts to minimise subjective distress (emotion focused) or attempts to actively avoid dissonance and distress (cognitive or behavioural avoidant). This understanding was supported by research showing that CBT for anxiety improved coping skills in comparison with CBT for depression (Chu & Harrison, 2008).

In the FRIENDS CBT literature, Lock & Barrett (2003) reported using the 'Coping Scale for Children and Youth' (Brodzinsky, Elias, Steiger, Simon, Gill & Clarke-Hiltt, 1992) to measure changes to coping processes. In general, Lock & Barrett (2003) reported that FRIENDS CBT successfully reduced avoidant behaviour and increased the capacity of children to confront and manage stressful situations in their lives. This was considered an important outcome in so far as the avoidance of anxiety –provoking situations was held to be a maintaining factor in anxiety disorders (Spence, 2001). This previous research provides a rationale for measuring coping skills in the current study. However, it is important to acknowledge that any changes to children's coping skills are likely to be smaller in comparison with another intervention as compared to no intervention (Prins & Ollendick, 2003).

3.9.2 Empathic attitude. Garaigordobil & Gaideano (2006) indicated that pre-adolescent children who displayed high empathy scores were more pro-social, assertive and considerate. They displayed less negative social behaviour such as passivity and withdrawal. They also displayed high self-concept, high capacity to analyse negative emotions, high emotional stability and tendency to be expressive and creative. Multiple regression analyses identified pro-social behaviour, low levels of aggression and high self-concept as variables predictive of empathy. Interestingly, girls were more likely than boys to display high empathy. This research would tend to indicate that high empathy is associated with factors protective of child psychopathology. This hypothesis is supported by meta-analysis indicating that positive relationships, non-directivity, empathy, warmth and encouragement

show above average effects ($r > .20$) and are variables considered to strongly mediate treatment gains (Cornelius-White, 2007). In the same meta-analysis it was further argued that taught educational interventions were less likely than more generic child-centred interventions to view the therapeutic relationship as a positive process variable (Cornelius-White, 2007). It might, therefore, be proposed that direct experience of empathic relationship in Concentration PCT will differentially enhance children's empathic understanding of themselves and others when compared with FRIENDS CBT. This leads to an expectation that children in Concentration PCT will be more likely to display changes to measures of empathic attitude (Funk, Fox, Chan & Curtiss, 2008) at post-intervention. This could be seen to reflect the difference between empathy as a core function in Concentration PCT and as a potentially indirect effect of FRIENDS CBT.

3.9.3 Classroom relationships. In FRIENDS CBT the person receiving intervention has been evidenced to view relationship more positively when the person delivering intervention has displayed alliance-building behaviours. A behavioural understanding of relationship in CBT has led to recommendations for the use of particular behaviours previously researched to help build alliances with the person or people receiving intervention (e.g., collaboration (Creed & Kendall, 2005)). In school-based research a behavioural understanding of relationship is supported by evidence that CBT precipitates positive changes to scholastic achievement and social relationship. These gains were thought to develop from reduced experience of threat and increased attention to learning and relationship (Wood, 2006).

There are clear distinctions between the ways in which FRIENDS CBT and Concentration PCT conceive therapeutic relationship. In FRIENDS CBT, behavioural interventions are thought to positively influence relationships. In Concentration PCT therapeutic relationships are the core function of intervention. In Concentration PCT there is consequently far less attention paid to behavioural antecedents of relationship and more attention paid to the emotional climate in which relationships can be developed. Using this information it might be useful to measure pupil self-report of classroom relationship both before and after intervention delivery. From this it would be expected that both FRIENDS CBT and Concentration PCT promote improvement. This prediction is supported by meta-analysis observing moderate post-intervention gains to relationship between different types of

intervention (Shirk & Karver, 2003). Consequently, there exists the likelihood that significant differences would be achieved in comparisons between FRIENDS CBT, Concentration PCT and curriculum as normal SEAL.

3.10 Curriculum as normal condition

The Department for Schools and Families (now Department for Education) developed SEAL to function as a comprehensive, whole-school approach to social and emotional learning. The SEAL programme is based on a model of emotional intelligence promoting self-awareness, self-regulation, motivation, empathy and social skills (Humphrey et al, 2008; Humphrey et al., 2010) and has the aims of developing effective learning, positive behaviour, regular attendance and emotional wellbeing (DCSF, 2005). SEAL was introduced into English schools in 2005 and is now widely implemented using the Primary National Strategy 'wave of intervention' model. Wave 1 involves quality first teaching of social and emotional and behavioural skills to all children. This occurs within the context of effective whole-school policies and frameworks, including staff training and continuing professional development. It uses seven key themes supported by curriculum materials. In the current study, the two themes spanning the time frame of this study were 'Believing in Me' and 'Relationships'. Both these themes were designed to develop self-awareness, management of feelings and empathy. These two themes were integrated into whole class delivery using a mixture of paper-and- pencil and interactive activity. (Interactive activity included, for example, paired, group and whole-class discussion). All schools in this study engaged whole-school SEAL, although, for the duration of the study, taught components were suspended in CBT & PCT. This provided a realistic benchmark from which to measure the added value of delivering CBT and PCT.

Some concerns have been expressed that theoretical underpinnings to SEAL lack conceptual clarity, with overlapping terminology used to describe similar concepts. For example, the terms 'social and emotional skills', 'social and emotional intelligence' or 'emotional literacy' is often used interchangeably. These inconsistent conceptual definitions and varied terminology may contribute to difficulty agreeing the best measures with which to research the effectiveness of SEAL (Wigelsworth, Humphrey, Kalambouka &Lendrum, 2010). SEAL has also been criticised for a lack of UK research, with existing programmes tending to cite US evidence. However, this US evidence has typically

involved efficacy rather than effectiveness trials; this means that study outcomes may be less applicable to normal community settings. There has been some UK research into the effectiveness of small group SEAL, showing improvement to children's self-reported social and emotional competence. However, these gains were modest and unsupported by the outcomes of corresponding parent and teacher reports (Humphrey, Kalambouka, Wigelsworth, Lendrum, Lennie & Farrell, 2010). Systematic attempts have also been made to evaluate comprehensive 'whole-school' SEAL in a UK setting (Hallam, Rhamie & Shaw, 2006). This evaluation was supportive of whole-school SEAL and further encouraged SEAL implementation in English schools. However, this study was criticised for using a conceptually ill-defined theory of emotional intelligence, failing to use a control group and over-relying on the views of teachers who had self-selected to participate (Craig, 2009). It is, therefore, clear that SEAL requires a more comprehensive evidence-base upon which to embed current practice and to guide future developments in UK school settings.

3.11 Summary

There is considerable evidence for the effectiveness of CBT and, in particular, for FRIENDS, the CBT intervention examined in this study. This research shows CBT - and, specifically, FRIENDS CBT - studies are infrequently compared with other credible interventions. It has been argued here that FRIENDS CBT should be compared with alternative theory-based as well as a non-CBT intervention whilst still ensuring the same standards of training and integrity of delivery apply to both CBT and non-CBT conditions.

3.12 Hypotheses

1. FRIENDS CBT and Concentration PCT will reduce anxiety symptoms and change anxiety risk status more than curriculum as normal SEAL.
2. Children reporting higher levels of baseline anxiety (SCAS > 42.48) will show greater reduction to mean anxiety scores in FRIENDS CBT and Concentration PCT than in curriculum as normal SEAL.
3. Girls will report greater reduction to mean anxiety scores in FRIENDS CBT and Concentration PCT than in curriculum as normal SEAL.

4. Children's coping skills in FRIENDS CBT, empathic attitudes in Concentration PCT and self-belief in both these conditions will show improvements when compared with the social and emotional aspects of learning curriculum SEAL.

CHAPTER 4: Method

4.1 Study aim

The study aim was to investigate differences between three school-based interventions designed to reduce and prevent anxiety symptoms: FRIENDS CBT, Concentration PCT and curriculum as normal SEAL. Both FRIENDS CBT and Concentrations PCT were directed by clear manual guidelines. Each manual guideline was distinct from the other. This avoided bias associated with comparison more typically made between manual and non-manual based intervention. The third intervention, an as normal condition, SEAL (see Section 3.10), provided a credible comparison group

4.2 Trial design

A cluster randomised controlled trial was used to compare pre-to-post intervention effects between each of the three conditions. This was because simple random sampling techniques would not have accommodated school-based samples. The study was powered as a'superiority' design, with hypothesised superiority of CBT and PCT measured separately against the SEAL condition using pre-test scores as covariate (ANCOVA). In addition to the main anxiety measure, coping skills, empathic attitudes, classroom relationships and self-belief were also measured in this way. The purpose of follow-up qualitative analysis was to identify intervention components most helpful to delivering teachers and to children moving from high-to-low risk status between pre-to-post measures.

4.3 Participants

Schools were considered eligible for this study if they were located within the borough of St Helens, had received whole-staff SEAL training, had implemented the whole-school approach to SEAL and were systematically integrating SEAL themes into taught personal health and social education classes. School data were examined to verify eligibility. Local Authority officers responsible for performance monitoring provided data. A number of mainstream primary schools in the local authority (N=46) were considered eligible. Only 11 of the 46 eligible schools elected to participate. Following blocked randomisation procedures, 4 schools were assigned to CBT, 4 to PCT and 3 to SEAL. The whole-school approach to SEAL continued in all schools. However, SEAL was temporarily suspended in schools delivering CBTand PCT (See CONSORT Flowchart: Figure 1).

4.3.1 Parental and child consent. An information sheet was sent home to parents of Year 5 children in all 11school settings. This explained the purpose of the study (Appendix A). Parents and children were then invited to withdraw consent by letting the school know. Consent was assumed if parents and / or children did not take this opportunity. This opt-out approach to acquiring consent was informed by the context in which the research took place. It was assumed that children and teachers would experience interventions as part of their normal daily classroom activity and that the local authority does not normally require consent for trialling new curriculum materials. For these reasons, although it was part of a research study, it was considered unnecessary to require opt-in consent from all children and their parents. The University's Departmental Ethics Committee approved this approach.

A number of parents did contact the researcher. However, none of these enquiries led to children being removed from the study. Only four children in FRIENDS CBT did not take part. These were children with special educational needs and were considered by their teacher unable to derive benefit from participation. It was unclear the degree to which children actively participated in the decision to opt-out and it is possible that low overall numbers of children opting out could have resulted from teachers failing to successfully implement systems for withdrawing consent. Alternatively, once the interventions had begun, low numbers of opt-out could also have resulted from children enjoying intervention and therefore selecting to continue to take part.

4.3.2 Protecting anonymity. Each participating child was given a code (number) allowing for his/ her identity to be protected. This was registered next to the child's name on the teacher's register. This number was also recorded on the front page of the child's questionnaire booklet. This number alone identified the child. A nominated teaching assistant within each school was instructed to distribute and collect questionnaires. S/He alone had access to questionnaire booklets. The researcher collected these on an agreed date. The class teacher agreed that s/he would not have direct access to questionnaire booklets

4.3.3 Safeguarding. During the planning process it was decided that guarantee of anonymity should be reconsidered where a child self-reported elevated anxiety scores. This exception was explained to children prior to completion of questionnaires. In these circumstances the researcher was

to contact the school and to identify the child by matching the number on their questionnaire booklet to the corresponding number on the teacher's register. It was agreed that a referral to specialist services could then be made. In practice, a substantial number of children scored in the clinical range of anxiety symptoms (Spence, 1994; SCAS > 42.48). Self-report scores were not used to breach anonymity for all these children. For a small number of persistently high scoring children (N= 5/6) it was considered appropriate to register concern with the school. Other than this, normal safeguarding procedures applied throughout the study. Teachers were therefore instructed to inform appropriate authorities if, during intervention sessions, a child disclosed information that suggested s/he might be unsafe. This would be standard practice in schools in any case. No incidents were reported of this nature.

4.4 Study settings

The study took place between March 2009 and June 2009. Class teachers delivered interventions over 10 weekly sessions, using the time slot normally allocated to personal health and social education (PHSE). All participating teachers had a baseline teaching qualification (Post Graduate Certificate of Education: PGCE). Those delivering the FRIENDS CBT intervention (N = 4) attended a one-day course facilitated by an accredited trainer and chartered psychologist (Appendix B). The local authority funded the cost of training teachers, supply cover to schools and purchase of participant manuals. Training involved an introduction to cognitive behavioural principles as well as a more practical orientation in programme delivery and use of the treatment manual. Teachers designated to deliver the FRIENDS CBT intervention were encouraged to adhere consistently to the agreed treatment protocol as in the manual. Those administering Concentration PCT (N = 4) had also attended a one-day training course (Appendix C). A chartered psychologist and trained person-centred therapist delivered this. The local authority funded training and supply cover to schools. Training involved an introduction to person-centred principles as well as a more practical orientation in programme delivery and use of the treatment manual (Appendix D). Teachers designated to deliver Concentration PCT were encouraged to adhere consistently to an agreed treatment/intervention protocol. Teachers delivering curriculum as normal SEAL (N=3) had participated in whole-school

training on the social and emotional aspects of learning curriculum SEAL, although this input was not part of the current study.

4.5 Interventions

FRIENDS CBT is a continuous programme of work delivered over ten weekly sessions lasting approximately one hour each. Each session builds upon the last. Sessions begin by establishing aims and objectives before reviewing the previous session's learning and then any homework tasks. Thereafter, children begin a sequence of tasks designed to achieve that session's learning objectives. Tasks are varied and involve paired, group and whole-class work. Task activities can involve paper and pencil, role-play and discussion, learning relaxation techniques, etc. FRIENDS CBT is a taught course and each session provides new learning. The programme is incrementally expected to build children's capacity to cope better with feelings of anxiety. Hence, a central theme is children's capacity to be 'confident' and 'brave' as opposed to 'avoiding' anxiety-inducing stimuli. (Miller, 2008)

Concentration PCT sessions involved an introductory game followed by an opportunity to engage in peer-to-peer interaction. This involved set periods of listening and speaking with a partner. This peer interaction was intended to afford children an opportunity to practise attention and listening whilst encouraging appropriate communication of emotion. Subsequent tasks typically involved teacher-led guided bodily awareness preceding a non-directed drawing activity. Children practised the drawing of emotion on a week-by-week basis. Initial activity involved drawing of positive emotions or experiences, developing over a number of weeks to the drawing of more difficult emotions. This process was well supported by the facilitating teacher who had been trained in the management of child disclosure and appropriate safeguarding procedures. Children were also encouraged to appreciate the boundaries of these activities and were prepared to consider appropriate and inappropriate disclosure. Teachers did not offer any direction during drawing tasks. There was, however, an emphasis throughout upon teacher-led whole-class interaction. This included opportunity for children to communicate feelings verbally to other class members. Again, teachers were trained not to offer direction but to facilitate respectful discussions using the person-centred principles of empathy, positive regard and genuineness. Sessions were typically concluded with a whole-class game.

SEAL is a whole-school approach involving 7 key themes at primary level. In this study, intervention delivery spanned two SEAL themes, 'Good to be me' and 'Relationships'. Both these themes were intended to develop knowledge, understanding and skills in the areas of self-awareness, managing feelings and developing empathy. Taught SEAL lessons involved both paper-pencil and interactive activity (for example, paired, group and whole-class discussion). Session frequency and duration were consistent between SEAL, CBT and PCT (see Section 3.10)

4.6 Testing procedures and assessment

Classroom teaching assistants administered assessments in schools one week before and after interventions were delivered. Each classroom assistant preceded testing by reading the same introductory script to child participants. Manual guidelines permitted all questionnaires to be read aloud in this way. This helped all children understand the questions. Testers were instructed to use the standard questionnaire booklets in order of sequence and to allocate an appropriate response time to each questionnaire item. The trial adhered to established procedures for maintaining separation between staff taking outcome measurements and staff delivering intervention. Delivering teachers and participants were blind to the wider study. In the following sub-sections, each assessment measure is described in detail.

4.6.1 Anxiety measure. The Spence Children's Anxiety Scale (see Section 2.7.1) (SCAS: Spence, 1998, 2003) is one of a group of measures that correspond to DSM-IV psychiatric classification. It was developed to examine anxiety symptoms in children aged 8to 12 years. It consists of 44 items, 38 of which assess specific anxiety symptoms relating to six sub-scales. The other six items comprise a lie scale designed to identify children displaying irregular patterns of response. The six sub-scales are social phobia, separation anxiety, panic attack/agoraphobia, obsessive-compulsive disorder, generalised anxiety, and physical injury fears. Spence (1998) reported internal consistency of .92 and Guttman split half reliability of .9. The internal consistencies of sub-scales were also acceptable (see Section 5.3). Test-retest data were available for 344 children who were reassessed after six months. The six months test–retest reliability correlation coefficient for the total score on the SCAS was 0.6. Convergent validity was also established by intercorrelation of SCAS scores with other measures. For example, the Pearson product moment correlation between SCAS total scores and

Revised Children's Manifest Anxiety Scale, (Reynolds & Richmond, 1978: RCMAS) total score was .71 (N=21). Each subscale correlated significantly with the RCMAS total score. Strong correlation was also observed between SCAS total score and child report on the Children's Depression Inventory (CDI; Kovacs, 1991) (r = .48, p <. 01). Each of the subscales on the SCAS correlated significantly with CDI scores. The correlation between the SCAS total score and the CDI was significantly lower than correlation between SCAS total score and RCMAS anxiety score. This showed discriminate value of SCAS as a measure of anxious rather than depressed symptoms. It also evidenced the measure as reliable and valid (see Section 2.7.1).

4.6.2 Coping skills measure. In order to compare coping strategy across the lifespan Amirkhan & Auyeng (2007) developed the Child Coping Strategy Indicator – Revised (CCSI-R: Amirkhan & Auyeng, 2007) from the adult CSI (Amirkhan, 1990). Amirkhan and Auyeng (2007) compared coping strategies across the lifespan in a community sample of 445 children and 266 adults. Cronbach's alpha coefficients were: problem solving .95, seeking support .97 and avoidance .92. The internal consistency scores of the child version (CCSI) showed each scale related to a unitary construct. These values compared favourably with adult values (Amirkhan, 1990). Amirkhan and Auyeng (2007) also calculated coefficients to determine whether each factor correlated with its counterpart in other age groups. Results evidenced similarity of a three-factor structure observed between age groups. Similarity in values between child and adult respondents showed constructs were commonly and consistently understood. In summary, the CCSI was selected because it has a well-established three-factor structure and displayed equivalency between adult and child measures.

4.6.3 Empathic attitudes measure. The Children's Empathic Attitude Questionnaire (CEAQ: Funk, Fox, Chan & Curtiss, 2008) was developed using classical test theory and item response theory. Funk et al (2008) reported internal consistency, as estimated from Cronbach's alpha, as .77 with a Rasch estimate of .75. Rasch principal component analysis has established that only 11 % of variance was unrelated to the linear measure. Rasch analysis of step thresholds and category fit statistics showed that each rating scale category reflected a meaningful distinction in empathy along the measured variable (Funk et al, 2008). Comparison with commonly used empathy measures yielded a convergent validity correlation of r = .57 whilst comparison with the Strength and Difficulties

Questionnaire: SDQ pro-social scale yielded a score of .39. Comparison with SDQ conduct problems scale offered a measure of divergent validity with an index of -.17 considered 'marginally acceptable' (Funk et al, 2008). Comparison with Crandall's social desirability scale (Crandall, 1975) suggested that both scales measured overlapping constructs, *r*=. 39. The CEAQ thus has an acceptable psychometric profile and is an appropriate measure of primary and secondary change (Funk et al, 2008). This means that the CEAQ can measure intervention designed to improve empathic attitude (primary change) or intervention where changes to empathic attitudes are not necessarily the primary function (e.g., a friendships group) (secondary change).

4.6.4 Classroom relationships measure. The ClassMaps Survey (Nickolite & Doll, 2008) is a whole-class measure conceptually related to individual measures of resilience in children (Prince Embery, 2008b). It was designed to provide an alternative to assessment of resilience derived exclusively from child self-rating of subjective experience. In ClassMaps, protective factors such as strength of relationships are located in a social context; in this way, the impact of social interventions can more easily be identified. The ClassMaps Survey subscales have shown strong internal consistency reliability. In studies of children aged nine to 11 years, coefficient alphas ranged from .86 to .96 (Doll & Spies, 2007) and .78 to .93 (Doll, Spies, Le Clair & Kurien, 2008). Paul (2005) provided further evidence of similarity between ClassMaps subscales and other selected scales measuring similar constructs: correlations ranged between .47 and .80. Doll, Spies, Strasil, LeClair, Fleissner and Kurien, (2006) also identified correlations ranging between.81 to .28. The existing evidence shows that most individual ClassMaps subscales can be used in isolation from each other as independent measures of intervention effect (Nickolite & Doll, 2008).

4.7 Outcomes

ANCOVAS with pre-test scores as covariate showed non-significant differences between conditions. This meant that CBT and PCT did not reduce anxiety scores more significantly than SEAL. Furthermore, secondary outcome measures of coping skill, empathic attitude and self-belief also showed non-significant differences between conditions. Effect sizes were calculated across end point scores using Cohen's *d* (Cohen 1988). Cohen's *d* is estimated as the difference between means divided by the pooled standard deviation. An effect size of 0.20 is considered small, 0.50 is considered

moderate whilst 0.80 is considered large (Cohen 1988). Baseline anxiety measures showed that 38% (N=105) of participating children self-reported anxiety symptoms above the clinical cut-off point (SCAS>42.48). Post-test measures further showed a significant drop in self-reported anxiety scores towards those reported by Spence (1998, 2003). These outcomes were unusual in so far as baseline measures were higher than expected. Also, post-test measures showed significant reductions, not only to CBT and PCT, but also to SEAL. These issues will be discussed more fully in Section 7.1.

4.8 Sample size

Systematic review of school-based prevention and early intervention programs for anxiety have used Cohen's *d* values to report post-test and follow up effect sizes ranging from (*d*) 0.11 to 1.37 (Neil & Christensen, 2009). Large variations in post-test and follow up effect sizes could not be easily accounted for, although, programme fidelity, leader rapport, relevant content and audience appeal were all suggested as possible explanations for these differences between interventions (Neil et al, 2009). More recent meta-analysis of anxiety prevention programmes has also used Cohen's *d* values to report a small, pooled post-test effect size of (*d*) .18 [95% (CI) .23, .13]. However, FRIENDS trials in this meta analysis demonstrated a larger post-test effect size (d=.25, Z=6.90, p<.001) than the other programmes (d=.11, Z =3.24, p<.001). This was statistically significant: Q between (1) = 8.91, p<.001 (Fisak, Richard & Mann, 2011). These meta analyses suggest that even small effect sizes at post-intervention may signify a positive developmental trajectory (Fisak et al, 2011). However, it remains questionable to base expensive changes to future school provision upon the expectation of only small changes to children's self-reported levels of anxiety. Hence, in this study, statistical power was set at .95 to detect at least a moderate effect size of (*d*) 0.5 between CBT, PCT and SEAL. For a study of this sort, the total sample size (N=252) was identified using G*Power 3.1 software (Faul, Erdfelder, Buchner & Lang, 2009).

4.9 Randomisation

The 11 schools that had elected to participate in this study were randomly assigned to condition using blocked randomisation procedures. This was achieved by blindly selecting from numbered labels that later identified host schools. The final sample of 11 schools randomly led to an uneven distribution of school to condition, with 3 rather than 4 schools in the curriculum as normal SEAL

condition. Also, of the original 306 participants, a number of spoiled baseline questionnaires were returned (N=11). Also, teachers independently withdrew a small group of children with special educational need (SEN) (N=4). The 11 spoiled returns were not concentrated in any single class or condition and can be considered random. The 4 SEN children were confined to CBT / PCT but not solely to a single class setting. Of the 4 SEN children, 3 were located in CBT and 1 in PCT. These SEN withdrawals were not pre-planned or consistently administered between settings. Also, a full CBT class (N=18) were unresponsive and failed to return questionnaires. Following spoiled returns, withdrawals and dropouts, the final study sample (N = 273) still exceeded the planned number. In the final sample, then, there were 75 children in the FRIENDS CBT condition, 122 in the Concentration PCT condition and 76 in the mal SEAL condition. Figure 1 illustrates this process.

Figure 1: Participant flow-chart

CONSORT Flow Diagram

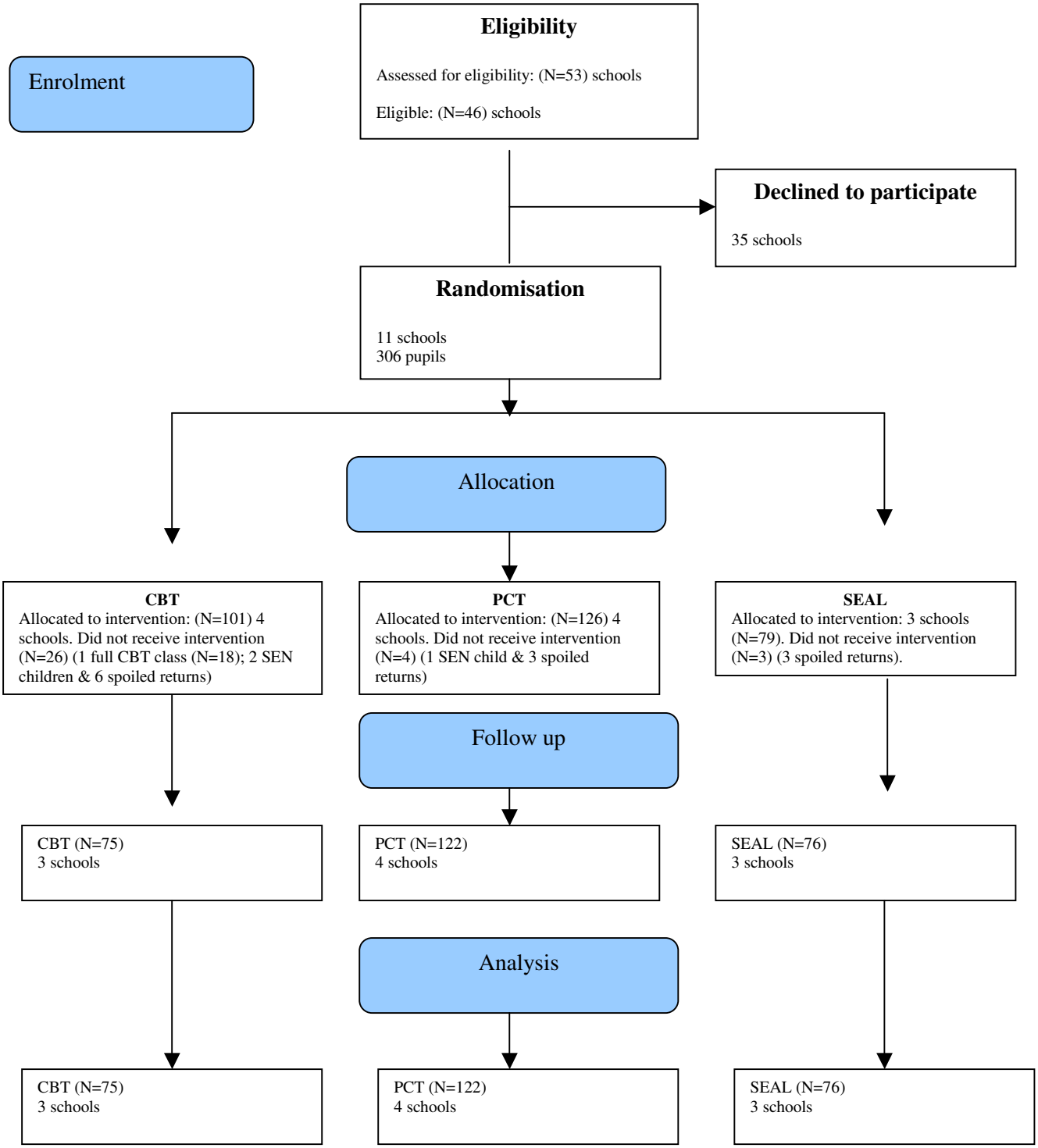

Figure 1

4.9.1 Sources of potential bias. The purpose of this study was to examine intervention effects in a normal schools sample. This was undermined by the fact that only 11 of the 46 eligible schools chose to participate. As a result, participating schools were in a minority and therefore less reflective of the primary school population as a whole (N=53). Also, whole-school sampling prevented the use of stratified random sampling techniques that might otherwise have dealt with any chance imbalances between conditions, for example, the number of boys and girls in each. Another weakness related to the random availability of only three schools in the curriculum as normal SEAL group. Risks associated with this imbalance may have presented more difficulties in a smaller overall sample. However, it is still acknowledged that more equal numbers of schools and participants would have been preferable. This point is also relevant to the dropout of one full CBT class (N=18), although, more concerningly, this class dropped out after randomisation and may therefore have partially compromised randomisation procedures. This point also applies to the loss, after randomisation, of 4 SEN children. This is a niche population of mainstream children and withdrawal was not pre-planned or consistently administered between settings. The loss of these children might also be considered a further source of potential bias.

4.10 Implementation

Standard implementation procedures were carefully applied to both FRIENDS CBT and Concentration PCT. This included, for example, close attention paid to intervention and sample selection, initial training on manual adherence, ongoing technical support for those delivering intervention, communication with stakeholders and process checks by academic supervisors (Banerjee, 2010; Durlak &DuPre, 2008; Greenberg et al, 2005; Humphrey et al, 2008, 2010; Perepletchikova et al, 2009). Within these wider implementation procedures there were planned checks on teachers' adherence to manual intervention guidelines. This involved completion by teachers of session-by-session self-scaling on perceived adherence to manual guidelines (Appendix E). Self-scaling was supported by observation at the mid-point of each intervention. These observations occurred over a one-week period and were made of two different sessions in each condition (sessions 5 and 6). This was because interventions in all schools began over a two-week period due to school arrangements and the selection of different afternoons to conduct weekly sessions. School visits were intended to

observe the degree to which researcher scaling of session adherence matched teacher scaling of session adherence. During visits the administrating teachers were observed to accurately register scaled scores ranging from 7 to 9 on a 10-point scale. Throughout intervention the teachers' scaled scoring of session integrity ranged from 6 to 9, which meant the total mean scores for each setting ranged from 7.4 to 7.9. This could be considered a realistic and positive measure of intervention integrity (Durlak & DuPre, 2008).

Effective implementation was not solely restricted to the consistent use of manual-guidelines and attention was also paid to the context within which interventions were delivered. For example, teachers were encouraged to engage children's attention and to encourage children's ownership over intervention delivery by, for example, devising unique class names, such as ... ' the fantastic 35'. Administrating teachers were also directed to identify sessions in time, for example, by using icebreaker activity to signify the beginning and end of each session. This instruction was designed to enhance children's experience of intervention uniqueness. Attention was also paid to monitoring the curriculum as normal SEAL comparison condition to ensure each school was moving through the same units of work (Good to be me; Relationships), to confirm that session frequency and duration were comparable to the time-limited interventions and that, where possible, the views of SEAL participants were sought. This meant the views of SEAL children could contribute to overall findings. Importantly, the same assessment protocols were carefully applied in the curriculum as normal SEAL conditions as were applied in each of the other two conditions. These procedures allowed SEAL to be a reliable benchmark from which to measure the potential benefits of both FRIENDS CBT and Concentration PCT (Durlak & DuPre, 2008).

CHAPTER 5: Results - quantitative

5.1 Sample population

Following removal of spoiled, incomplete and invalid questionnaires as described below, the final sample comprised 273 children of whom, 143 were male (52%) and 130 (48%) female. The numbers of boys and girls in each of the three conditions was not significantly different, $\chi^2 = 2.74$, p (.25) >.05

Table 1: Sample numbers by gender and intervention condition

Gender	CBT	PCT	SEAL
Male	34	70	39
Female	41	52	37
Total	75	122	76

A one-way ANOVA was used to examine any pre-test gender differences to boys and girls' self-reporting of anxiety symptoms. As in previous research (see Section 2.6.2), girls were more likely than boys to self-report higher levels of pre-test anxiety symptoms, $F(1, 272) = 23.92$, $p > .001$. This meant gender differences required due consideration in the main analysis.

The UK Office for National Statistics (2004) cited risk factors for child psychopathology including disrupted or separated families, parents with no educational qualifications or belonging to a poor family in a deprived area. The levels of deprivation within each school setting were therefore examined using the Income Deprivation Affecting Children Index (IDACI). The IDACI score involves matching all pupils counted as being on roll as at the January 2009 School Census to their Lower Level Super Output Area (SOA) using each pupil's home postcode as the matching reference. The SOA is calculated using the number of children who live in families receiving income support, jobseekers' allowance, tax credits, disabled persons tax credits or are deemed to be income deprived. Once each pupil in a school is mapped to their SOA of residence it is possible to determine the IDACI score for that pupil. The aggregate for each school is then calculated by a simple athrimetic average of

each pupil's matched IDACI score. The aggregated IDACI score can therefore be used as a measure of relative deprivation in that school. The IDACI scores were as follows: FRIENDS CBT.29: Concentration PCT.31: and SEAL.37. A one-way analysis of variance (ANOVA) was used to examine the significance of differences between IDACI scores. This showed non-significant differences between groups F (2,9) = .18, p >.05 and meant that deprivation factors did not require further consideration in the main analysis.

5.2 Missing data analysis

Questionnaires (N=306) from all intervention settings were manually screened for spoiled returns. Unidentifiable, deliberately damaged or only very partially completed booklets were disregarded (N=11). A full CBT class (N=18) and a small group of children with special educational need (SEN) (N=4) were not included. Scores from all remaining questionnaire booklets were then recorded (N=273). The resulting database was screened for inaccurate data entry and then checked against manually scored questionnaire booklets. This involved checking each pattern of initial responses and then randomly spot-checking other data points. This final process did not show errors and it was concluded that data entry had been accurate.

A missing value analysis was then conducted. Univariate statistics revealed more missing data in later sections of the post-test battery. This trend could be identified from missing data in post-intervention responses to the Coping Strategy Indicator subscales: problem solving, 8.4 %, seeking social support, 8.8%, avoidance, 8.8%, The trend was also present in the ClassMaps Survey subscales, believing in me, 9.1 %, my teacher 9.1%, my classmates, 9.9 and the Children's Empathic Attitude Questionnaire, CEAQ, 9.1 %, These percentages were elevated in comparison with pre-intervention scales and earlier scales on the post-intervention battery. Further examination showed that discrepancies were not the consequence of block omission / administrator error. Cross tabulation showed that more data were missing from the Concentration PCT group than either the FRIENDS CBT or curriculum as normal SEAL groups. Also, the high-anxiety group (SCAS>42.48) omitted more data than the low-anxiety group (SCAS<42.48), whilst boys omitted more data than girls. These patterns of omitted data did not vary markedly by cross tabulation with indicator variables, indicator variables being pre- and post- missing data for particular scales. This meant that sample characteristics

rather than child preference for particular scales were likely to have been responsible for patterns of missing data. This evidence showed that data could not simply be considered missing completely at random (MCAR) as (MCAR) presumes missing data do not depend upon observed data. Results from Little's MCAR test: χ^2 (220) = 327.36, p<.001 confirmed this.

The expectation maximization (EM) method was consequently selected to accommodate the presence of missing data related to the content of observed data (Missing at Random: MAR) (Schafer & Graham, 2002). The EM method does not accommodate missing data 'missing not at random' (MNAR). In the current sample a hypothetical example of MNAR would have been omission by anxious children of particular patterns of response in the anxiety measure (SCAS). This type of error pattern was not in evidence and data could be accepted as MAR. Application of the EM method resulted in estimated means and standard deviations corresponding closely to estimated means and standard deviation acquired from real values. This was evident in sections of the test battery displaying most missing data. (Appendix F)

5.3 Scale and subscale reliability

The internal consistency of scales and subscales was calculated using Cronbach's alpha coefficients. Scores ranged between .91 for the SCAS to .71 for the CCSI-R.

Table 2: Internal reliability scores for the six dependent variables (Cronbach Alpha)

Scale	Variable	Cronbach Alpha	Number of items
Spence Anxiety Scale (SCAS, 1998)	Anxiety	.908	38
CCSI-R (Amirkhan and Auyeng, 2007)	Coping	.706	33
CEAQ (Funk, Fox, Chan, Curtiss, 2008)	Empathy	.740	14
My Classmates, ClassMaps Survey (2007)	Relationships	.835	6
My Teacher, ClassMaps Survey (2007)	Relationships	.846	7
Believing in Me, ClassMaps Survey (2007)	Mastery	.781	8

The CCSI-R contained three subscales. Amirkhan et al (2007) reported Cronbach's alpha for problem solving .95, seeking support .97 and avoidance .92. The current study obtained lower internal reliability scores for problem solving .55, seeking support .62 and avoidance .43. A more general difficulty establishing subscale reliabilities was evident when reliability scores were obtained for each item. This was because most items displayed lower than acceptable reliability scores and it was not possible to increase overall subscale reliability by omitting selected items. A solution was to summate all item scores in each of the three subscales to form one global scale, which achieved a Cronbach's alpha of .71. This more general measure of coping was considered acceptable and was subsequently used as a global scale. Cronbach's alpha for the CEAQ was .67. Item-by item analysis showed that CEAQ item 1 displayed a poor internal reliability score. The reason for this was not immediately apparent although its content - '*when I'm mean to someone, I usually feel bad about it later'*- could be construed as vulnerable to socially desirable responding (Dadds et al, 1998) and included the word *'mean'*, which is more commonly used in North America and less familiar in its usage to children in the North West of England. On removal of this item, Cronbach's alpha for the global scale rose to .74. This item was subsequently removed from CEAQ scale.

5.4 Checking normality assumptions

The Kolmogrov-Smirnov test was used to analyse the degree to which scaled scores were normally distributed. When applied to pre- and post- scores the sample distributions were frequently evidenced as non-normal. However, sample size was relatively large (N=273) and in all but two scales ("my classmates" and "my teacher") Q-Q plots, histogram, values of skew and kurtosis did not indicate a problem with non–normal distribution. Satisfactory variance ratios were also recorded for both pre- and post- measures. Significant scores on some of the K-S test statistics were therefore attributed to acceptable deviation from normal distribution in a relatively large sample (N=273). As indicated, exceptions to these were the two ClassMaps Survey subscales relating to "my teacher" and "my classmates". Histograms for both these scales showed pre- and post- scores clustering at the higher end of the distribution. This resulted in consistently negative measures of skewness with most children reporting positively at both pre- and post- measures. Due to skew and non-normal distribution these two scales could not be considered reliable measures of intervention effect and were

subsequently removed from the study. This meant that changes to classroom relationships could not be reliably measured. (Appendix G)

5.5 Testing hypotheses

To address hypotheses previously outlined (see Section 3.13) it was necessary to pose a series of questions.

5.5.1 Do FRIENDS CBT and Concentration PCT reduce anxiety scores more significantly than curriculum as normal SEAL?

Table 3: Mean (standard deviation) pre- and post-intervention anxiety scores by group with pre-to-post effect sizes

Time	CBT	PCT	SEAL
Pre	36.90 (19.50)	40.02 (16.64)	37.2(16.88)
Post	28.2 (15.24)	30.15 (19.14)	26.05(15.23)
Cohen's *d*	0.5	0.5	0.7

A one-way analysis of covariance (ANCOVA) was conducted with pre-test anxiety scores as covariate. Results showed a non-significant main effect of group, F (2,272) =.46, p >.05. This suggested that FRIENDS CBT and Concentration PCT did not reduce anxiety scores more than curriculum as normal SEAL. Between CBT and PCT, the post-test effect size of (d) 0.1 was small and non-significant. Likewise, between CBT and SEAL, the post-test effect size of (d) 0.14 was also small and non-significant, as was the post–test effect size between PCT and SEAL of (d) 0.23.

5.5.2 Do anxiety risk statuses positively change between pre- and post- measures?

Previous research had categorised risk status using a clinical cut-off identified by Spence (1994: SCAS>42.48) (see Section 2.6.1). For example, Lock and Barrett (2003) showed an at-risk group was more responsive to intervention than a not-at-risk group. This method of categorising risk was therefore used in the current study with groups identified in terms of high-anxiety and low-anxiety. In the sample of children reporting higher levels of baseline anxiety (SCAS>42.48) (N=105), 70 moved to low-anxiety risk status at post-measures. This is shown in Table 4.

Table 4: Cross tabulation of pre- and post-risk status for total sample

		Post	
		High	Low
Pre	High	35	70
	Low	13	151

Changes to categorisation of risk status between pre- and post-measures were analysed using McNemar's Test. Reduction to risk status in the total sample was statistically significant χ^2 (1) = 37.78 p<.001. Based on the odds ratio, high-anxiety children were twice as likely to reduce risk status than they were to remain in the high-risk group. To examine changes to anxiety risk status in each of the three intervention groups a series of McNemar's Tests were undertaken.

Table 5: Cross tabulation of pre- and post- risk status for FRIENDS CBT

		Post	
		High	Low
Pre	High	9	22
	Low	1	41

Table 5 shows that 31 children had baseline scores in the high-anxiety FRIENDS CBT group with this number reducing to 10 following intervention delivery. This meant that 22 children in the FRIENDS CBT group reported reduced risk status between pre- and post- measures. Changes to categorisation of risk status between pre- and post- measures were analysed using McNemar's Test. The overall reduction to risk status was statistically significant (McNemar exact test, p = .001). Based on the odds ratio, this showed that high-anxiety FRIENDS CBT children were 2.4 times more likely to reduce risk status than to remain in the high-risk group.

Table 6: Cross tabulation of pre- and post- risk status for Concentration PCT

		Post	
		High	Low
Pre	High	20	29
	Low	9	64

Table 6 shows that 49 children were in the high-anxiety Concentration PCT group at baseline with this number reducing to 20 following intervention delivery. This meant that 29 children in the Concentration PCT group reported a reduced risk status from high- to low-anxiety. There were a relatively high number of children (N=9) moving from low- to high-risk status, of whom 7 were girls and 2 were boys. These were evenly distributed between the four Concentration PCT classes and did not indicate a specific issue regarding a particular setting. Changes to categorisation of risk status between pre- and post- measures were analysed using McNemar's Test. The overall reduction to risk status was statistically significant (McNemar exact test, $p = .002$). Based on the odds ratio this showed that high-anxiety PCT children were 1.47 times more likely to reduce risk status than to remain in the high-risk group.

Table 7: Cross tabulation of pre- and post- risk status for curriculum as normal SEAL

		Post	
		High	Low
Pre	High	6	19
	Low	3	46

Table 7 shows that, at baseline measure, 25 children scored in the high-anxiety SEAL group with this number reducing to 6 following intervention delivery. From this we can see that 19 children positively changed risk status between pre- and post- measures. Changes to categorisation of risk status between pre- and post- measures were analysed using McNemar's Test. The overall reduction to risk status was statistically significant (McNemar exact test, $p = .001$). Based on the odds ratio this

showed that high-anxiety SEAL children were 3.1 times more likely to reduce risk status than to remain in the high-risk group.

5.5.3 Do high anxiety children (SCAS> 42.48) reduce mean scores more significantly in FRIENDS CBT and Concentration PCT than in curriculum as normal SEAL?

It was necessary to establish in the high-anxiety group whether or not any interventions reduced anxiety scores more significantly than any other.

Table 8: Mean post-test scores for children in the high and low anxiety groups (SD) with between-group effect sizes

	CBT	PCT	SEAL
High (SCAS > 42.48)	35.70 (14.94)	35.85 (23.60)	32.22 (19.78)
Low (SCAS< 42.48)	22.71 (13.08)	26.32 (14.40)	22.21 (11.20)
Cohen's *d*	0.9	0.5	0.6

To examine the performance of children scoring above and below the clinical cut-off point (SCAS: 42.48), a 2 (anxiety risk status) x 3 (group) ANCOVA was used with pre-test SCAS scores as covariate. High-anxiety children (SCAS >42.48) reduced mean anxiety scores significantly more than low-anxiety children (SCAS< 42.48), $F(1,272) = 8.90$, $p < .05$ with a large effect size of (d) 0.6. However, this effect did not differ significantly between conditions, $F(2,272) = .001$, $p > .05$, with post-test effect size between CBT and PCT of (d) 0.007, between CBT and SEAL of (d) 0.20 and between PCT and SEAL of (d) 0.17. Small, non-significant effects were due to slightly lower reporting of anxiety scores in post-test SEAL as compared to both CBT and SEAL.

5.5.4 Do boys and girls respond differently to intervention type?

Table 9: Mean post-test scores for girls and boys scoring high pre- test anxiety (SCAS>42.48) (SD) with between-group effect sizes

	CBT	PCT	SEAL
Girls	36.04 (14.24)	45.73 (21.12)	30.70 (22.10)
Boys	34.33 (19.04)	24.69 (21.52)	34.80 (15.81)
Cohen's *d*	0.1	0.9	- 0.2

Previous research has shown that girls and boys display different patterns of self-reporting, with girls more inclined to score highly and then to reduce scores between pre- and post-measures (see Section 2.6.2). To examine the relationship between gender and condition a 2 (gender) x 3 (group) ANCOVA was used with pre-test SCAS scores as covariate. There was a significant interaction effect between condition and gender, $F(2, 271) = 4.07$, $p < .05$. Planned contrasts revealed this significant interaction was between gender and Concentration PCT, $t(115) = 2.75$, $p < .05$. This was because girls in Concentration PCT reduced anxiety scores significantly less than boys, with a large effect size of (*d*) 0.9 (see Table 9). This effect was present in each of the four PCT classes, suggesting that intervention type rather than other contextual factors such as teachers' gender or therapeutic competency was responsible. There was also a non-significant main effect of gender on the degree to which anxiety symptoms reduced, $F(1, 271) = 4.07$, $p > .05$. These meant that girls in the total sample, contrary to prediction, did not reduce anxiety symptoms more significantly than boys (see Section 2.6.2).

5.5.5 Does FRIENDS CBT improve coping skills more significantly than Concentration PCT or curriculum as normal SEAL?

Table 10: Mean pre-to-post scores for coping (SD) with pre-to-post effect sizes

	Pre (SD)	Post (SD)	Cohen's *d*
CBT	63.33 (11.63)	58.38 (13.46)	-0.4
PCT	65.71 (10.92)	62.35 (13.52)	-0.27
SEAL	63.88 (11.46)	59.94 (12.75)	-0.32

To examine the effects of interventions on coping skills, a one-way ANCOVA was used with pre-test coping scores as covariate. Table 10 shows that coping scores decreased slightly rather than increased as predicted. There was a non-significant effect for group, F (2,247) =1.17, p >.05. This meant coping scores did not significantly differ between groups. From this we can conclude that FRIENDS CBT did not improve coping skills more significantly than Concentration PCT or curriculum as normal SEAL.

5.5.6 Do empathic attitudes improve more in Concentration PCT than they did in FRIENDS CBT or curriculum as normal SEAL?

Table 11:Mean pre- to- post empathy scores (SD) with pre- to- post effect sizes

	Pre (SD)	Post (SD)	Cohen's *d*
CBT	35.28 (6.06)	34.27 (6.90)	-0.15
PCT	34.70 (4.99)	33.92 (5.42)	-0.15
SEAL	36.37 (5.21)	34.39 (5.44)	-0.37

To examine the effects of intervention on empathic attitudes a one-way ANCOVA was conducted with pre-test empathic attitude score as covariate. Table 11 shows that empathic attitude scores decreased slightly rather than increased as predicted. There was a non-significant main effect for group, F (2,247) =.60, p >.05. This meant empathic attitude scores did not differ significantly

between groups. As for coping, empathic attitudes did not improve in Concentration PCT more than FRIENDS CBT and curriculum as normal SEAL.

5.5.7 Does self-belief in FRIENDS CBT & Concentration PCT improve scores more significantly than the curriculum as normal condition SEAL?

Table 12: Mean pre- to- post- 'believing in me' subscale scores (SD) with pre- to- post effect sizes

	Pre (SD)	Post (SD)	Cohen's *d*
CBT	16.00 (5.38)	16.37 (4.93)	0.07
PCT	16.51 (4.26)	16.43 (4.47)	-0.02
SEAL	15.86 (4.35)	15.44 (3.70)	-0.10

To examine the effects of intervention on feelings of self-belief a one-way ANCOVA was conducted with pre-test self-belief score as covariate. There was a non-significant main effect for group, F (2,247) =.96, $p > .05$. This meant scores on self-belief did not significantly differ between groups. As for the other outcome variables, self-belief did not improve in FRIENDS CBT or Concentration PCT more than in curriculum as normal SEAL.

5.6 Summary

The key findings of the main analysis were non-significant differences between groups. These findings were also present in the sub-group of children reporting higher levels of baseline anxiety (SCAS> 42.48). In this at-risk sub-group there were, however, significant numbers of children changing anxiety risk status between pre- and post-measures. These changes were present in each of the three intervention conditions with the odds ratio showing the likelihood of children changing risk status was greatest for those in curriculum as normal SEAL condition. This meant Hypothesis 1 could be rejected as FRIENDS CBT and Concentration PCT did not reduce anxiety symptoms or change anxiety risk status any more significantly than the curriculum as normal SEAL condition. It also meant that Hypothesis 2 could be rejected, as children reporting higher levels of baseline anxiety (SACS > 42.48) did not show greater reductions to anxiety scores in FRIENDS CBT and Concentration PCT than they did in the curriculum as normal SEAL condition. Girls were more likely to self-report in the high-

anxiety group at pre-intervention although they were no more likely than boys to self-report reduced anxiety symptoms at post-test measure. Non-significant differences to anxiety reductions between boys and girls therefore meant that Hypothesis 3 could be rejected. The only gender effect was in Concentration PCT with girls reducing anxiety symptoms significantly less than boys. Coping skills, empathic attitudes and self-belief measures in each of the three conditions, which were predicted as differential intervention outcomes in Hypothesis 4, showed non-significant differences between groups. Hence Hypothesis 4 could also rejected. As previously discussed (see Section 5.4), classroom relationships could not be reliably measured in the current study.

CHAPTER 6: Results - qualitative

6.1 Introduction

To extend our understanding of intervention effects (Miles & Huberman, 1994) a complimentary mixed method assessment was used (Greene, Caracelli & Graham, 1989). This differs from triangulation, which is an approach seeking to corroborate pre-existing results using qualitative follow-up analysis. A complimentary approach is different in so far as its purpose is not to provide additional evidence supportive of a pre-existing hypothesis but to provide new and enriched understanding of the phenomenon subjected to study. In the current study, individual, semi-structured teacher interviews were used to gather information on aspects of intervention that delivering teachers found most helpful. Semi-structured interviews were selected to provide a consistent approach to gathering information, which also allowed for variation in the responses of delivering teachers (Miles & Huberman, 1994). Children reporting higher levels of baseline anxiety (SCAS> 42.48) were also invited to take part in post-test focus groups activity. Focus groups were chosen because they provided a developmentally sensitive method for gathering children's opinions. They also implicitly recognised that children's opinions developed in communication with other children (Gibson, 2007). This method was particularly appropriate for acquiring the views of children who had participated in whole-class social learning. Focus groups had 6-7 participants and were representative of both gender and rate of reduction to anxiety symptoms in the high-risk sub-group. This was achieved using a stratified random sampling technique, through which children were banded for both gender and pre-to-post anxiety reductions. Otherwise, simple random sampling could have resulted in chance imbalances between boys and girls but also between children reporting different levels of anxiety reduction. This approach to randomisation helped ensure each focus group was representative of the actual sample of children changing risk status between pre-to-post measures.

All teachers delivering both CBT and PCT were sampled for semi-structured interview. Teachers of SEAL were not interviewed. This was because SEAL did not meet criteria set forth by Spielmans et al (2007) for establishing the credibility of a comparison condition: it was not directly preceded by a theoretically based training and did not involve the use of a discrete treatment manual. It was also a continuous programme of work preceding and extending beyond the period of the current

study. Although close attention was paid to SEAL implementation (Durlak & DuPre, 2008), the views of SEAL teachers could not be directly compared in this design to the views of FRIENDS CBT teachers or Concentration PCT teachers.

Data produced by teacher interview and focus group activity were coded using techniques recommended by Attride-Stirling (2001). Inclusion criterion related only to participant feedback that was of relevance to the study. Hence, only extraneous or irrelevant contributions were omitted from the data set. In this way codes could be built in to sub-themes, organizing themes and global themes. This essentialist realist approach to gathering data helped control for the absence of multiple-raters and helped minimise subjective researcher bias

6.2 Thematic analysis

Interviews and focus groups were orthographically transcribed (i.e., the verbal information was retained) and subject to thematic analysis (TA). This is a process through which recurrent themes and patterns can be drawn from the text. Braun and Clarke (2006) have described TA as independent of essentialist approaches in psychology that report the objective reality of participants. It has also been distinguished from constructivist paradigms generating meaning from the environment within which participants responded. It is, therefore, considered more flexible and adaptable to administer in each. Braun and Clarke further noted that TA is different from methods such as interpretive phenomenological analysis and narrative analysis because of its independence from theoretical underpinnings. It can, therefore, be applied to different theoretically-based methods.

In the current study TA was applied to an essentialist method for interpreting the data. This means an objective perspective was assumed and that transcribed data were reported objectively without attempts to apply a wider interpretation based upon environmental or social environmental context. In the current study, the data acquired from transcribed interviews and focus groups were directly reported using the frequency with which teachers/ children commented upon distinct aspects of intervention activity. This can be distinguished from a 'constructionist' method generating meaning from the environment within which data had been gathered or a contextualist method combining environmental analysis with a more direct interpretation of the available data. TA has been criticised for lacking structure and being vulnerable to the reporting of vague process and outcomes. In response

to these criticisms the current study has made a concerted attempt to transparently report both process and outcomes.

6.3 Running thematic analysis

Thematic analysis was carried out using Attride-Stirling's (2001) step-by-step approach. Following familiarisation with the text the authors advised creating a coding framework relevant to the purposes of the research. It was recommended that codes in text should be concise, relevant to research and discrete from each other. Following construction of coding frameworks it was considered advisable to reflect upon themes emerging from the coded text (Braun & Clarke, 2006). Visual mapping of codes was recommended to support this process (Attride-Stirling, 2001). When themes were established, as recommended, further consideration was given to the different levels of meaning existing within (i.e., whether patterns of meaning within codes represented global, organising or sub-themes). It was further advised that the process of refining themes should lead to a point where it is possible to construct a thematic map of global, organising and sub-themes. The purpose of this map is to explain and summarise thematic networks emerging from the coded text and is typically accompanied by a written report of the process. In practice, TA is not a sequential or linear process occurring in clear stages. There are marked overlaps between different parts of the process (e.g., coded text to themes or further categorisation of themes) with refinement of the data better achieved over a number of sessions. The whole process should ultimately produce a clear and evidence-based interpretation of the data. In this study, thematic analysis has been applied to the transcribed texts of teacher interviews and child focus groups. Each of these two areas of qualitative analysis will now be described in turn:

6.4 Teacher interviews

6.4.1 Participants. Participants. were all fully qualified teachers. They had delivered interventions between four and eight weeks prior to interview. Two of the teachers had accrued between two and three year's professional experience. These two teachers were aged 25 to 35 and had delivered Concentration PCT. All others were aged 35 to 55 and had accrued five or more years' professional experience. With only one exception, all the teachers were female. The sole male participant was in age category 35 to 55 and had delivered the Concentration Programme.

6.4.2 Procedures. Teachers from both FRIENDS CBT and Concentration PCT (N=7) engaged in a semi-structured interview lasting approximately 40 minutes (Appendix H). Their responses were then carefully transcribed, with the frequency of particular themes providing evidence of teacher's most commonly expressed views. The author conducted interviews individually in quiet areas of each host school.

6.4.3 Results. Transcripts of all teacher interviews (N=7) were analysed using a coding framework generated by the frequency with which they either positively or negatively commented upon discernable aspects of intervention activity. Recurrent but similar comments made by the same teacher were recorded as a single entry. Comments made by teachers were omitted from the coding framework if they did not relate to any aspect of intervention activity. Using the above criteria it was possible to develop the coded text in to distinct sub-themes. Sub-themes were ranked from those most commonly expressed in the coded text to the least commonly expressed. This was the sole criterion used to rank sub-themes. The author alone undertook coding of the text. This increased susceptibility to researcher bias especially in the absence of a measure to establish the reliability of coding. However, it also introduced a degree of consistency and removed problems establishing interrater reliability, which, in the current study, would have involved the consistent application of a coding framework between raters.

Ranked sub-themes are shown in Table 13.

Table 13: Frequency with which coded text contributed to each sub-theme.

THEME	FIENDS CBT teachers (N=4)	Concentration PCT teachers (N=4)	TOTAL=8
Pupils sharing feelings	5	16	21
Programme endorsement	3	8	11
Manuals	5	5	10
Relaxation	3	6	9
Pupil engagement	3	5	8
Drawing	0	7	7
Sessions frequency	3	3	6
Too much content	4	0	4
Too much writing	4	0	4
Group size	4	0	4
Teacher training	0	4	4
Coping skills	3	0	3
Teacher training	2	0	3
Staying safe / confidentiality	1	0	1
Relationships with teachers	1	0	1
Group size	1	0	1

The following sections provide select examples of coded text.

6.4.3.1 Positive comments

Concentration PCT teachers frequently endorsed the therapeutic value of pupils sharing feelings with each other. In all, 16 different comments were made in 4 PCT interviews about the therapeutic value of sharing feelings.

MT: ……they found that quite reassuring because they might think that they are the only person in here who feels like that. I think that they were pretty honest as well

SK: I think it was nice for them to see that some of the feelings they have are not just felt by them and talking about it in a sensible way helped them to see that it was normal as well

Five similar comments were made in the FRIENDS CBT interviews about the value of sharing feelings:

LD: I liked the fact that the children were encouraged to be open and honest about their feelings and not to worry about expressing them. The booklet sort of gave them a confidential outlet for that

AC: …more vulnerable kids ……they have an opportunity to speak up and not feel afraid ……realise that everyone feels frightened and scared and intimidated at some point

CR: ….it was just a good opportunity for them to think "I can do something about this, what I'm feeling is normal" and from that point of view I think it's helped them enormously

Five comments were made during the Concentration PCT interviews describing pupil engagement with the process of intervention delivery:

SK: I think it flowed quite nicely: at first, the children found the questions not evasive but they knew they were serious but, as the sessions progressed, they actually really got stuck in and started to think deeper

SK: Yes, they found it hard to display their feelings and thoughts, they switched off at first and gave superficial answers but, as they have gone on, they have got much deeper

These passages of text indicate a settling-in period for Concentration PCT in which children became less inhibited and more appreciative of session format.

In the Concentration PCT interviews the intervention was endorsed on eight different occasions:

MT: I'd like to use it again, yes; it's definitely a benefit

KP: Yes and they actually used to quite look forward to it_ _ _ they called it, 'the fantastic 35'

Three similar comments were made during the FRIENDS CBT interviews:

EJ: They have all benefited. I would say the children who got more out of it were the children who were able to relate to the programme _ _ _ _ there were some children who really got into it and could relate to the topics, which was good

LD: I felt that generally it was child-friendly, easily accessible; yes, there weren't any major problems using it

Six comments were made in the Concentration PCT interviews about the therapeutic benefits of relaxation:

KP: There was one week when you were not here and they said to me, 'Are we going to do the relaxation stuff?' and we were really surprised how many liked it

SK: Yes, the first time we did it there were some that really struggled with it _ _ _ _there were boys who were not taking it seriously but once we got into it and they knew what was coming they knew what to do and they found it better, quicker to get into relaxation

SK: I would think, to be honest, the relaxation at the beginning helped us, helped them take it more seriously _ _ _ I think they looked deeper into themselves doing that preparation first

Three similar comments were made in the FRIENDS CBT interviews:

LD: They liked and enjoyed the relaxation techniques

CR:. …they liked the breathing techniques they can use and so on – yes, it was really good

Therapeutic drawing was endorsed by seven comments made during the Concentration PCT interviews:

> MT: I think the drawing was good _ _ _ they really enjoyed the drawing _ _ _ _ and you can see they're trying to get stuff…demons… out of them; obviously, they're not child soldiers but they're dealing with issues and kids like that like drawing
>
> KT: You know when they had to draw a feeling, like? Me, as an adult, how the heck do you do that? Well… they really went to town on that
>
> KT: We spoke about that we thought they would struggle with…. the drawing and putting down different feelings… but they never. That is what we spoke about: adult's imagination closing as they get older. You can't have as good an imagination as a child, but they were brill

Four positive comments were made about training in the Concentration PCT interviews. Two examples are given in full to capture the purpose and function of Concentration PCT training:

> MT: I actually quite enjoyed the day _ _ _ I must admit, because of the way I am, when ___said we were going, I wasn't looking forward to it at all but within half-an-hour, I found it really interesting. Again it was more of a selfish thing really, thinking about myself or my family, and why, in my case, when I've had to be quite tough, thinking of what's happened because people were opening up and everybody has got their own little history going on _ _ _ _ _ _ I knew exactly what it was getting at so, in that respect, it was useful because it explained to me what we were trying to get at there _ _ _ what makes a happy child, basically, or what makes a happy person. I don't know if that was the main point of it but that's what I took away from it
>
> KT: Apart from some of the technical terminology the training was great. Particularly it was interesting listening to your experiences with your children, you had some quite challenging kids. As I say, some of the activities on the Power Point and the talk coming out from that, I don't know if you remember, some if it was quite candid, people being open and baring their souls

Three positive comments were made about coping skills in FRIENDS CBT.

> AC: They really enjoyed learning about how they would feel when they were nervous or in a situation that they felt afraid; they all know they can cope… they have got a strategy to cope now
> AC: I think I could say to the children, now; what have you learned from it? They could give me three or four definite things that they could learn, so relaxation, being aware of changes in your body when you feel nervous, anxious or upset and then how to cope and how to help each other
> CR: …getting them to think, stop, think, recognise your feelings of anger, recognise your feelings

A teacher who had delivered FRIENDS CBT made a positive comment about an improved teacher-pupil relationship:

> CR: I think I got to know the children better because I knew a bit more about what was going on in their lives outside the school as well as inside school – it gave me that opportunity to get a more rounded picture of them really, so I thought that was definitely helpful

6.4.3.2 Negative comments

Four comments were made in FRIENDS CBT about too much writing activity:

> CR: I read through everything with them, I didn't leave them, there are several children who couldn't read it and follow the instructions and write down what was asked of them

Four comments were made in FRIENDS CBT about too much content for children to cope:

> EJ: I thought there was a lot of content to the booklet, which I found quite difficult to put across to the class
> AC: …it could be cut down drastically… I mean, keep it at 10 weeks or for how many weeks, keep it running because it is a good programme but think it could be cut really

Two negative comments were made about FRIENDS CBT training delivery:

> EJ: I think if you got that pack you would just be able to put it into place without the training because there is that much content to it and all the sessions are there for you
>
> CR…the training was very poor…. I thought the presentation was shocking

One comment was made in FRIENDS CBT regarding children's concerns about confidentiality:

> CR: …they would perhaps disclose it to me on their own but I think they felt they were baring their souls by writing it in their book. So some of them felt a little bit intimated about that

6.4.3.3 Session structure and mode of delivery

Five comments were made in FRIENDS CBT regarding the value of having intervention manuals:

> EJ: The fact that the lesson objectives were there and all the resources were there, that was good, being able to pick it up and run with it
>
> CR: I thought the manual was really, really helpful, the children have loved completing the books and it was very user-friendly……. the ideas and sessions that we had were really good
>
> CR: they had those lovely attractive booklets to write their answers in and they were kept in their trays so they treated it as ownership

Five similar comments were made in Concentration PCT about the value of manual delivery.

> MT: Yes, absolutely no problem at all; in fact, it was quite nice to have something structured like that
>
> KT: Yes, they liked the booklet

Four comments were made in FRIENDS CBT interviews about an optimal group size for FRIENDS CBT delivery.

> EJ: I think it would be an idea to do it as a small group and to take them out in small groups on a weekly basis _ _ _ _ the children who didn't need it dragged the others down
> EJ: I would definitely use it and train one of the TAs to take a small group of children out _ _ _ I definitely would think that it would benefit small groups but I wouldn't use it as a class again

Three comments were made in FRIENDS CBT interviews regarding the duration and frequency of sessions:

> AC: I would do 3 x 20 minutes a week if I could rather than an hour – an hour is not - not for my class – they are poor ability, a lot of them, so it is too long anyway'
> CR: '…….some classes could easily do one hour perhaps but I know with the children I've got 30 minutes is tops really

Three comments were also made in Concentration PCT about session frequency:

> MT: I think it would be useful to try and do at least once a fortnight throughout the year or possibly once a week throughout the year.

Several of these comments suggested longer-term intervention activity involving shorter and more frequent sessions'.

Figure 2 below helps identify which themes were shared between teachers in FRIENDS CBT and Concentration PCT and which were particular to each.

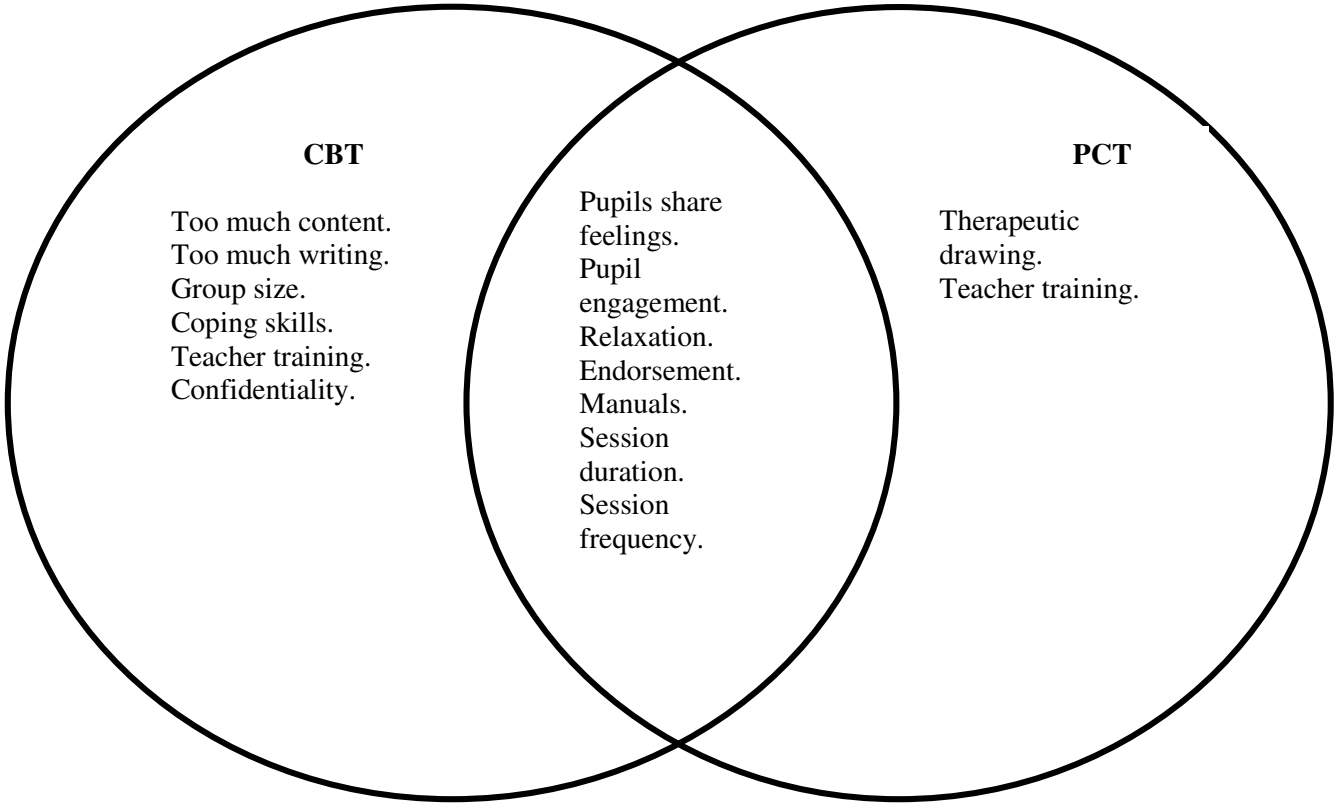

Figure 2: Overlapping and distinct sub-themes emerging form the coded text of teacher interviews.

Sub-themes were further refined in to organising and global themes. The first organising theme, ‘mode of delivery’, referred to the more logistical aspects of intervention implementation, including whether teachers liked materials, manuals, training, session frequency and whether or not they would use the materials again in the future. The second organising theme, ‘intervention activity’, related to positive and then negative activity and experience arrived at through participation in intervention delivery. The global theme ‘satisfaction’ was drawn from the context within which teachers responded during structured interview. This was because teachers tended to provide responses denoting either satisfaction or dissatisfaction with different aspects of intervention activity. Using this framework it was possible to build a profile of why teachers considered intervention either useful or otherwise. These findings are presented in Table 14.

Table 14: Indication of the frequency with which coded text contributed to the development of particular sub-themes in to organising and global themes

GLOBAL THEME	ORGANISING THEME	SUB THEME
Satisfaction	Mode of delivery	Teacher endorsement (11)
		Intervention manuals (10)
		Session frequency (6)
		PCT training (4)
	Positive activity	Pupils sharing feelings (21)
		Therapeutic relaxation (9)
		Pupil engagement (8)
		Therapeutic drawing (7)
		Coping skills (4)
		Physical activity (2)
		Role-play (1)
Dissatisfaction	Negative activity	Too much writing (3)
		No confidentiality (2)
		CBT training (2)
		Task lacks purpose (1)

6.4.3.4 Teacher interviews summary

Teachers in both FRIENDS CBT and Concentration PCT endorsed intervention activity and indicated they would use the materials again. Teachers in FRIENDS CBT less frequently expressed a degree of dissatisfaction at the quality of pre-intervention training and the quantity of materials children were required to be taught. In particular they were concerned about the literacy and language demands made of some less able children. Both FRIENDS CBT and Concentration PCT teachers thought sessions should be shorter in duration, approximately 30 minutes, with some suggesting they should be delivered more than once a week throughout the school year. Teachers in both conditions made frequent comments about the therapeutic value of relaxation techniques. Teachers in Concentration PCT also felt drawing had therapeutic value. FRIENDS CBT teachers made similarly positive but less frequently expressed comments about the therapeutic value of other taught coping skills. Both groups of teachers felt programme manuals had been very useful.

6.5 Child focus groups

In the main study it was shown that that high-anxiety children (SCAS >42.48) derived a significant benefit from all intervention. Those high-anxiety children who had shown a reduction to anxiety risk status were therefore sampled from selected settings. A single setting was used to represent each intervention condition. In contrast with teacher interviews it was considered appropriate to conduct child focus groups with a curriculum as normal SEAL group. Unlike teacher interviews, participants in curriculum as normal SEAL were not directly disadvantaged by the contextual benefits of pre-intervention training and / or knowledge of manual delivery. Focus groups were transcribed and subject to thematic analysis. The frequency with which particular themes presented themselves provided evidence of participant views.

6.5.1 Participants. Six to eight children aged 9 to 10 years participated in each of the three focus groups. All participating children had reported a higher level of baseline anxiety (SCAS >42.48) at pre-intervention and had reported a clinical reduction to anxiety symptoms at post-intervention. The composition of each group approximately reflected the gender ratio in the overall population of children in the high anxiety group.

6.5.2 Focus Group Activity. Focus group activity sought children's perceptions of intervention effects. Focus groups lasted approximately 40 minutes and each involved a set of standard primary questions (Appendix I). These groups were chosen because they offered children a developmentally appropriate opportunity to construct and share opinions with peers (Gibson, 2007).

6.5.3 Procedure. Active parental consent for child focus group activity was sought because children were selected from the wider population on the basis of self-reported anxiety symptoms and were removed from their normal daily routine for interview, with responses recorded. Prior to the focus groups an explanatory letter and consent slip was sent to parents (Appendix J). The letter explained that selected children had responded well to intervention and that focus group activity intended to find out why. It was further explained that focus groups would collect general information about the value of intervention for all children. It was explained that both schools and individual children would remain anonymous. The member of school staff coordinating intervention delivery also directly sought child consent. Prior to the beginning of focus group activity, children met with the researcher in a quiet area of the school. They were then read a brief preparatory script explaining the general purpose of the focus group. They were told that individual responses would be recorded. They were then told that recorded responses would remain private and that they would not be identified by the responses they made. It was further emphasised that final reporting of the study would neither identify them nor their school. Prior to beginning the session children were afforded a final opportunity to opt-out and return to class.

6.5.4 Results. Children's responses varied depending upon the intervention they had received. For example, children in the FRIENDS CBT group commented upon their experiences of FRIENDS CBT. The technical process of analysing all transcribed data involved applying the same exclusionary criteria to all text irrespective of group identity. The text was coded by the frequency with which children either positively or negatively commented upon a discernable aspect of intervention activity. Recurrent but similar responses from the same child were recorded as a single entry. Comments were omitted from the coding framework if they did not relate to any aspect of intervention activity. This principle applied to comments ostensibly relating to intervention activity but without any relevance to its therapeutic purpose. For example, the following comments were included:

……you could draw things out that you did not want in your head

…It was good _ _ _ you could draw out your feelings on paper but I liked to keep some inside

Applying this criterion meant omitting the following comment.

……..my favourite is drawing houses and cars and things

This was because it related to drawing but not the function of drawing within this intervention.

Using the above criteria it was possible to develop the coded text in to distinct sub-themes. which were then ranked from those most commonly referred to in the coded text to those to which were least commonly referred.. Ranked sub-themes are shown in Table 15.

Table 15: Frequency with which coded text contributed to each sub-theme

Sub Themes	CBT	PCT	SEAL	TOTAL
Relationships with teacher	3	8	3	14
Drawing	1	11	-	12
Relaxation	7	5	-	12
Talking and listening	3	3	1	7
Feeling safe	5	3	2	7
Frequency of sessions	2	1	1	4
Physical activity	2	-	-	2
Too much writing	3	-	-	3
Lack of safety	2	-	-	2
Role play	-	-	1	1
Not knowing purpose of task	1	-	-	1

The following sections will provide illustrative examples of child focus group responses.

6.5.4.1 Common sub-themes

Children in all three conditions commented positively upon the social and emotional context within which each intervention was delivered. This involved comment upon relationship with teachers and concern about protecting privacy and confidentiality [labelled 'feeling safe' in sub themes].

Eight separate comments were made in the Concentration PCT focus groups endorsing the therapeutic value of teacher relationships

PCT: She would help you with your problems and your feelings and stuff

PCT: …she is a caring person

Three similar comments were made in each of the other two interventions, also endorsing the therapeutic value of teacher relationships:

CBT: If you don't know them it's just a person that teaches you daily, but if you know them more often then you can get to talk to them more

SEAL: I think it helps because if there are problems you don't like you can tell them and they can change something about it

Five comments were made in Concentration PCT and two each in FRIENDS CBT and curriculum as normal SEAL regarding the importance of confidentiality (feeling safe):

CBT: .she wouldn't let anybody sit near each other so that nobody could see your answers and spread it [sic] around

PCT: we didn't have to give all our private stuff, not all the things that you need to keep in you, the things that you want to keep to yourself, keep to yourself, but things that you think you would like to spread, you can spread them

SEAL:..it was making sure that it is all private and that it doesn't go out of the classroom

Another common theme from both FRIENDS CBT and Concentration PCT focus groups was the children's desire to talk and listen to each other. Three comments were made in the CBT focus group and three in PCT:

CBT: I liked it when you had to answer questions to a partner

CBT: I didn't used to like people listening to what I said but now I do

PCT: Well, I thought it was quite helpful because you could get a bit closer to your friends and they could know a bit of your problems if you wanted them to

PCT: …each person takes it in turns to write what you are feeling and their partner could help them sort it out

One similar comment was made about talking and listening in the SEAL focus group:

SEAL: …they show their side of the story and then the other person shows their side of the story and then we get some witnesses

Both FRIENDS CBT and Concentration PCT positively commented upon the value of relaxation to intervention success. FRIENDS CBT registered 7 positive comments about relaxation and Concentration PCT registered 5.

> CBT: It was like 1, 2, 3 and then do it and it was calm and all the windows were shut and it was dead quiet
>
> CBT: I liked it when we used those things to calm us [child takes deep breath], and you lay on the ground
>
> PCT: I thought the relaxing part was good as well… I had loads of problems with my dad and everything, with him being ill, and it kind of soothed my feelings and it stopped me from being stressed
>
> PCT: It was calming, it calms you down and stuff and it like pulls you through

6.5.4.2 Distinct sub themes

Eleven comments were made in Concentration PCT endorsing the therapeutic value of drawing.

> PCT: It was really good because you could show your feelings and draw pictures on how you feel
>
> PCT: It's like you could get rid of it, so you could just take it off your mind

Only one comment was made in the FRIENDS CBT group regarding the therapeutic value of drawing:

> CBT: …when we saw this picture of a Koala saying when you are worried something happens, like your heart beats faster, and you had to draw yourself and what happens when you worry yourself… I liked that bit

The therapeutic value of drawing was a frequently expressed theme in the Concentration PCT focus group and reflected Concentration PCT's emphasis upon this activity.

Five children in the Concentration PCT group and one in each of the other two interventions commented positively upon session rules regarding confidentiality:

> CBT: ….we could write things down if something is wrong and Mrs _____ makes sure where our books are
>
> PCT: …it was good because only certain people would find out about it
>
> SEAL: The class sign something to say that they won't say anything

Confidentiality was a more significant issue in Concentration PCT because this programme of work centrally involved peer-to-peer communication.

The value of physical activity received two positive comments from the FRIENDS CBT group:

> CBT: I liked it when we were doing them actions, them things like a bird when we were going like that [child does actions]

Role-playing received one positive comment from the curriculum as normal SEAL group:

> SEAL…we are doing these scenarios and each person gets a character to act out and we do different things that we do at home and things that happen outside of school

Children in each of the three conditions recommended more frequent sessions. Two comments were made in FRIENDS CBT expressing a desire for more frequent sessions:

> CBT: Monday, Tuesday, Wednesday then stop; Monday, Tuesday, Wednesday

CBT: Monday, Tuesday, Wednesday, Thursday, but not on a Friday

One comment was made in each of the other two interventions about session frequency:

PCT: I'd like to do it more often because, like, twice a week because you can get all your feelings out

SEAL: I would like to make it longer and we don't do enough of it and we want to do more

Three negative comments were made in FRIENDS CBT about too much writing.

CBT: Because you had to write and then you had to tick and then you had to do something else, then you had to do something else then another thing and another thing

CBT: Because you had to write and then go to the cat, then write again, then tick it, then write it and tick it again

CBT: I don't like writing, because I can't write a lot

Two negative comments were made about confidentiality and feeling unsafe in FRIENDS

CBT: Like in the question booklet… asks stuff you don't want to tell

CBT: …like secrets and stuff about your family that you don't want to tell but they force you

One negative comment was made in the FRIENDS CBT group about not knowing the purpose of a task:

CBT: It was a little bit boring because you had to be cat

Figure 3: Overlapping and distinct sub-themes emerging form the coded text of pupil focus groups

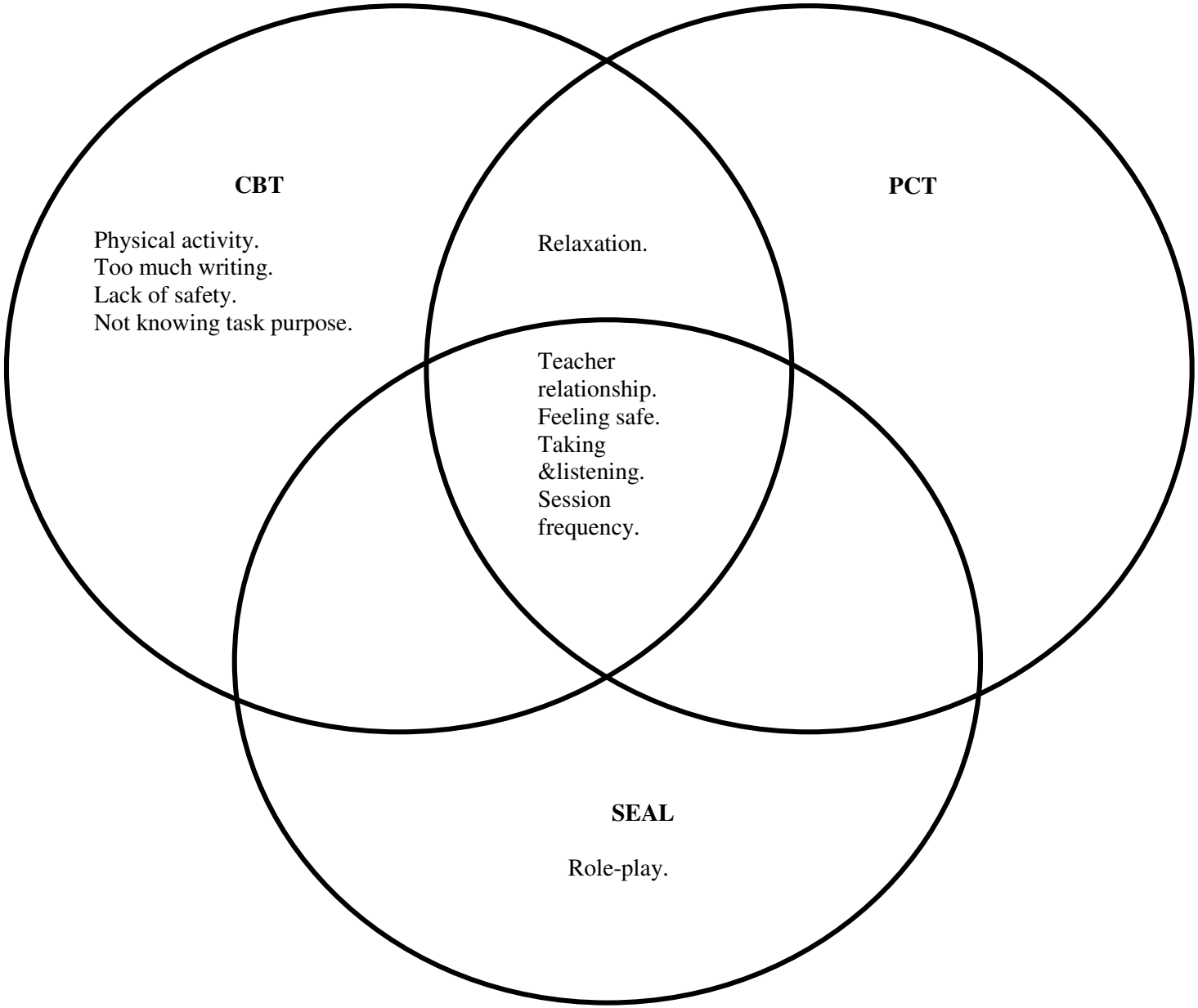
CBT
Physical activity.
Too much writing.
Lack of safety.
Not knowing task purpose.
PCT
Relaxation.
Teacher relationship.
Feeling safe.
Taking &listening.
Session frequency.
SEAL
Role-play.

Figure 3

These sub-themes were further refined in to organising and global themes. The first organising theme, 'classroom context', related to the social, emotional and logistical framework within which interventions were delivered. The second organising theme, 'intervention activity', related more to the activity and experience arrived at through participation. The global theme 'satisfaction' was drawn from the overall context within which children responded. This was because children's comments rarely deviated from elements of the intervention they considered either satisfactory or unsatisfactory. For example, they rarely, if ever, provided responses that were abstracted from their immediate experience or social experience of intervention delivery (e.g., little or no reference to the overall purpose of the intervention or its role within the wider curriculum delivery, etc.). However, this is in alignment with the expected developmental functioning of pre-adolescent children (see Section 2.8). Using this framework it was possible to create a picture of why children in the high-anxiety group found intervention either satisfactory or unsatisfactory. These findings are represented in Table 16 below.

Table 16: Indication of the frequency with which coded text contributed to the development of particular sub-themes in to organising and global themes.

GLOBAL THEME	ORGANISING THME	SUB THEME
Satisfaction	Class room context	Teacher relationships (14)
		Feeling safe (9)
	Positive intervention activity	Drawing (12)
		Relaxation (12)
		Talking and listening (7)
		More sessions (4)
		Physical activity (2)
		Play (1)
Dissatisfactions	Negative intervention activity	Too much writing (3)
		No confidentiality (2)
		Task lacks purpose (1)

6.5.5 Focus Group Summary. The most prominent sub-theme emerging from the coded focus group text related to children's relationship with their teacher. Children clearly valued a positive relationship with their teacher. More frequent references to the therapeutic value of teacher relationship in Concentration PCT reflected this approach's emphasis upon therapeutic interaction. Children in FRIENDS CBT and Concentration PCT both reported the therapeutic value of relaxation activity. Comments on the therapeutic value of drawing were, of course, confined to Concentration PCT, as this activity did not take place in FRIENDS CBT. Therapeutic drawing in Concentration PCT was the most frequently referenced activity in any of the three groups. The therapeutic value of talking and listening was frequently commented upon in both time-limited intervention and via a single entry in the curriculum as normal SEAL group. Other intervention activities in FRIENDS CBT and curriculum as normal SEAL were less frequently commented upon. These included physical activity in FRIENDS CBT and role-play in curriculum as normal SEAL. Children's views about rules pertaining to talking, listening and confidentiality (feeling safe) were more frequently expressed in Concentration PCT. This reflects Concentration PCT's emphasis upon therapeutic communication and the vulnerabilities introduced by this activity. There was a tendency to request more frequent session delivery in each of the three intervention conditions. Infrequent negative comments were made in FRIENDS CBT. These involved negative comments made about the quantity of writing and a single entry about lack of task purpose.

6.6 Similarity and differences between child focus groups and teacher interviews

The most notable difference between teachers and children lay in their respective tendencies to comment upon the importance of confidentiality and feeling safe during intervention delivery. This was clearly a salient issue for children and something they considered a pre-requisite for social and emotional learning activity. This had a very practical resonance for children, with concern expressed about disclosed information being misused in the playground or outside school. It led to an emphasis upon rules governing the disclosure and use of personal information. Children were generally innovative but sensible about how this could be practically achieved in the classroom.

Interestingly, teachers did not comment with any frequency on the importance of pupil confidentiality and safety. This may well result from teachers viewing pupil confidentiality and safety as a general issue and not one specifically related to intervention delivery. However, it may also be due to the different priorities and perspectives teachers and pupils may have. These findings suggest that pupil confidentiality and appropriateness or otherwise of pupil disclosure should be a central part of pre-intervention teacher training.

Another area where teachers and pupils differed was in their respective emphasis on the value of teacher-pupil relationships to intervention success. To children this was an issue of the utmost importance, with frequent comments made about relationship with their teacher. Teachers, however, infrequently commented upon relationship with children, preferring to focus upon the technical and logistical aspects of intervention delivery. This might result from teachers' general practice being sourced in positive relationships with pupils and a tendency not to comment upon what might be considered a given aspect of good practice. However, another reason might be that teachers viewed therapeutic relationship with children as a source of professional incongruity. To illustrate this point we can consider the multiple roles that teachers have as corporate parent, educator and, in this instance, administrator of an intervention. It is perhaps unsurprising that teachers might require support and training to manage these competing roles. These findings again suggest the role of teacher, as therapeutic support, needs to be dealt with more explicitly in pre-intervention training.

There were several areas where both teachers and children shared very similar views aboutintervention delivery. For example, teachers and pupils both thought that relaxation and bodily awareness provided therapeutic and practical benefits. Pupils typically relayed feelings of calm whilst teachers commented upon behavioural benefits. Teachers in both FRIENDS CBT and Concentration PCT also valued the role of talking and listening. Teachers recognised its importance whilst children expressed a wish to communicate with classmates. Children also sought rules and procedures to manage confidentiality, etc. Both teachers and children in Concentration PCT frequently expressed appreciation for the therapeutic value of drawing. Teachers and children also suggested that sessions

should be of a shorter duration and perhaps delivered over a longer period of time. They commented less frequently on other intervention activities, including physical activity and play in both groups. Negative comments were less frequently made, although a smaller number of comments were made by teachers and pupils in FRIENDS CBT to indicate too much paper-pencil activity and excessive repetition.

In summary, comparison between child and teacher feedback showed a high level of agreement between teachers and children as well as between FRIENDS CBT and Concentration PCT. Where there did exist difference between children and teachers this did not seem confined to either group, although infrequent negative comments were expressed by teachers and children participating in FRIENDS CBT. On an overall basis, adult and child participant's valued participation in both interventions, agreeing almost universally that they would undertake both programmes again. Indeed, some teachers indicated they would now integrate intervention components into their ongoing delivery of the social and emotional aspects of learning curriculum. Figure 4 illustrates the areas of similarity and difference between teacher interview and child focus group.

Figure 4: Overlapping and different themes emerging from teacher interviews and pupil focus groups.

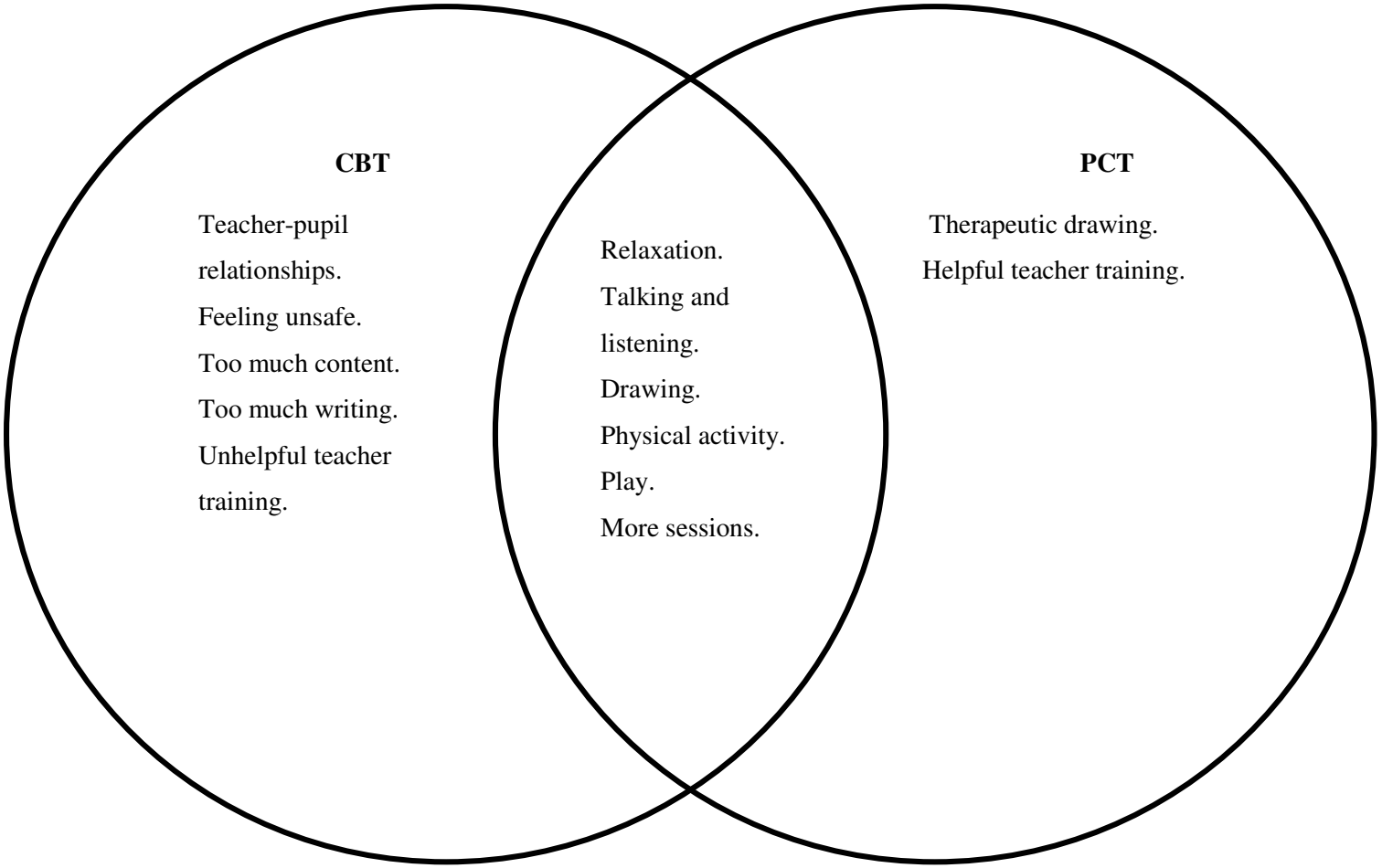
CBT
Teacher-pupil relationships.
Feeling unsafe.
Too much content.
Too much writing.
Unhelpful teacher training.
Relaxation.
Talking and listening.
Drawing.
Physical activity.
Play.
More sessions.
PCT
Therapeutic drawing.
Helpful teacher training.

Figure 4

6.6 Summary

There exists considerable overlap between the views of all teachers and at-risk children. The only substantive difference between teachers and children was in relation to teacher-pupil relationships and the importance of protecting children's confidentiality. These were important issues for children but infrequently commented upon by teachers. Concentration PCT teachers valued pre-intervention training whilst FRIENDS CBT teachers did not. Notwithstanding these differences, teachers and children in all conditions valued most therapeutic activity and a relatively small number of criticisms were restricted to FRIENDS CBT for involving too much writing and content. However, participants generally endorsed all interventions, with teachers indicating they would use intervention again in the future. Teachers felt that future implementation could be modified, with sessions delivered more frequently and lasting for a shorter period of time.

CHAPTER 7: Discussion

7.1 Quantitative outcomes

The outcomes of this study showed non-significant differences between conditions. This effectively meant that CBT and PCT did not reduce anxiety scores more significantly than SEAL. Also, secondary outcome measures of coping skill, empathic attitude and self-belief all showed non-significant differences between conditions. These results were surprising, as prior evidence predicted differential gains for CBT and PCT. Results were further complicated by higher than expected baseline measures of anxiety. High baseline scores were also present in each of the three conditions. These baseline scores showed 38% (N=105) of participants had self-reported anxiety symptoms above the clinical cut-off point (SCAS >42.48). Higher than average levels of deprivation in school samples may have in part contributed to these elevated baseline scores. This is because deprivation factors are a known risk for child psychopathology (Office for National Statistics, 2004). Also, the risks of psychiatric disorder may be considerably higher than most point estimates suggest. This is thought to result from existing prevalence studies failing to adequately measure developing comorbidities between disorders, for example, anxiety and depression and between sub-types of the same disorder, for example, separation anxiety and social phobia. The point is that simple snapshot studies might underestimate the actual prevalence of child psychiatric disorders as they occur in typical community samples (Costello et al, 2003).

Overall results are difficult to countenance within the parameters of the current cluster control design, which envisaged post-test differences between conditions. There are, however, some possible reasons for these unexpected results. For example, taught SEAL themes were designed to improve self-awareness, managing feelings and develop empathy. Taught sessions were delivered with the same intensity and frequency as CBT and PCT. They might, therefore, have helped reduce pre-to-post levels of anxiety. Also, regression to the mean and time effects may have, in part, reduced pre-to-post scores. However, SEAL is a continuous programme of work, meaning it is unlikely that gains could be reasonably explained in this way. Also, in relation to time effects and regression to the mean, Spence

(1998) previously reported good test-retest reliability for the SCAS in a large community-based sample.

An inconclusive set of results lends some weight to the argument that other possible mediating influences might have played a part. These might have included the therapeutic competency of delivering teachers, the class and school cultures to which all children belonged and the differential quality of implementation procedures. These issues may be of more relevance in cluster control trials where schools rather than children are randomised to condition. This is because the possibility of within-treatment variance increases with the number of separate settings. A reasonable argument can therefore be made for more carefully examining common effects, especially in these cluster control trials. The same argument can also be made for examining other non-specific effects, such as regression to the mean and time-effects. This is because common effects, for example, teacher competency and classroom culture, may well have contributed to each setting's variance from the overall mean scores. All these issues are of practical relevance, as recent meta-analysis of anxiety prevention programmes report only small-pooled effect sizes using Cohen's (*d*) values (Fisak, at al, 2011). Many of these studies use a cluster control design and lack a comparison or control condition that is credible using Spielman's (2007) criteria. This raises the distinct possibility that intervention effects reported in these studies were confused with common or non-specific effects.

In the current study, the only intervention-specific effect was noted in Concentration PCT, where girls reduced anxiety symptoms significantly less than boys. Previous research shows pre-adolescent boys may be more able to access social emotional learning through interaction and experience rather than through language- and literacy-based activity. Conversely, girls may be better able to engage in language and literacy-based activity. This is because girls are thought to be more adept than boys at processing emotive content into language. Boys, however, require more support to process emotive content and prefer to do so through experience and interaction. In a practical sense, girls are better at naming and communicating feelings (Gurian et al, 2001) and, hence, gender effects in Concentration PCT

may have been due to the use of more boy-friendly interactive and experiential components. This hypothesis invites further research examining whether or not boys and girls prefer different types of social and emotional learning.

7.2 Qualitative outcomes

Qualitative outcomes showed participants commonly agreed in respect of the intervention activity they found most helpful. For example, focus group feedback suggested that positive teacher relationships influenced previously at-risk children's perceptions of intervention success. This corroborated previous findings from person-centred (Cornelius-White, 2007) and resilience research (Doll et al., 2009) establishing the quality of classroom relationships as a key predictor of pupil functioning and further emphasised the importance of teacher-pupil relationships to the social and emotional functioning of pupils. Both previously at-risk children and delivering teachers also agreed the importance of effective peer-to-peer relationships, with an emphasis placed upon the value of talking and listening. A focus on peer-to-peer relationships corroborated the outcomes of previous research, showing enhanced peer relationship improved resilience and positively affected intervention outcomes. (Furlong, Ritchey, O'Brennan, 2009) From the outcomes of the current study and from those of previous relevant research it is, therefore, possible to suggest that enhanced teacher-pupil relationship and peer-to-peer relationships are likely contributors to intervention success in schools.

Relaxation in FRIENDS CBT and bodily awareness in Concentration PCT were predicted at pre-intervention to achieve similarly positive outcomes. This was because previous research had shown participants in different theoretically based relaxation interventions achieved similarly positive outcomes (Lohaus & Klein-hebling, 2000). It was, therefore, possible to anticipate that bodily awareness in Concentration PCT and relaxation in FRIENDS CBT would both tap into general gains associated with relaxation. This was a likely reason why children in both Concentration PCT and FRIENDS CBT focus groups expressed similarly positive views about relaxation and bodily awareness. This illustrates the point that different theoretical underpinnings do not necessarily translate into markedly

different modes of therapeutic delivery (Wampold, 2001). It suggests that research should gather feedback from children more frequently, as their experiences of intervention delivery does not always differentially reflect theoretically constructed differences. This problem is illustrated by re-analysis of comparison between intervention labelled CBT and non-CBT showing the non-CBT intervention had actually comprised 60% CBT components (Suveg et al., 2009). Future comparisons between credible intervention should therefore acknowledge that researchers understanding of difference between intervention need not reflect children's actual experience.

In the current study, Concentration PCT teachers and previously at-risk children also valued therapeutic drawing. Children particularly enjoyed the opportunity to spontaneously express emotion without necessary recourse to the use of language or literacy skills. This is an important benefit because pre-adolescent children vary in their capacity to use language and literacy skills (Bernstein et al, 2008; Cartwright et al, 2006; Grave et al, 2004). Also, drawing in the Concentration PCT programme allowed children to express emergent or not yet symbolised emotion (Conway, 1997; Stapert, 1997) and therefore presented them with an accessible and non-verbal therapeutic modality in which to work. Notably, teachers expressed surprise that therapeutic drawing in Concentration PCT was an accessible and enjoyable activity. Teachers' initial views perhaps reflected a more general bias for learning using language and literacy-based activity (Goleman, 1995). In social and emotional learning this bias may also be attributed to the processes through which new interventions are developed. This is because acquisition of empirically supported status (Chambless, 1996; Chambless & Hollon, 1998) is contingent upon the faithful replication of manual-based intervention guidelines. As a consequence, literacy, language and other easily replicated cognitive tasks are often used (for example, FRIENDS; Barrett et al, 2000a; 2000b). The key point, however, is that pre-adolescent emotional learning is not solely formulated in language and that children may also benefit from experiential learning through, for example, mindfulness, acceptance or other experiential training (Amstader, 2008).

7.3 Implementation procedures

A number of variables are known to mediate the effectiveness or otherwise of school-based intervention, including school organisation, teacher training and support, the skills of delivering teachers and the social and physical environment in which sessions are conducted (Banerjee, 2010; Greenberg et al, 2005; Humphrey et al, 2008). It is, therefore, insufficient to assume that standards of adherence in more controlled clinical efficacy studies can be as easily replicated in school-based effectiveness studies (Pugh, 2010). On this basis it may be more realistic to consider a balance between intervention integrity and adaptation in real world settings as the key to intervention success (Durlak & DuPre, 2008). This means acknowledging the importance of intervention integrity whilst also recognising that much is to be learned from participant feedback. For example, teachers in this study preferred more stimulating pre-intervention training extending beyond simple familiarity with manual intervention guidelines. They also tended to prefer less paper and pencil activity and less repetition. They also expressed a preference for briefer sessions, more frequently delivered over a longer period of time. Previously at-risk children tended to share these views and, additionally, wanted clearer rules governing the use of personal information. They also seemed to desire increased opportunities to develop better relationships with teachers.

These are clearly important findings for future intervention delivery. However, common research practices more typically fail to gather this type of feedback from participants. They tend; therefore, to characterise delivering practitioners as merely purveyors of empirically supported intervention and children as passive recipients. This contributes to a static research agenda in which standards of implementation and adherence are not improved. This is because the active contributions of those delivering and receiving interventions are not used to refine the effectiveness of future implementation and adherence procedures. For these reasons future research should more meaningfully consider the process of effectively implementing manual-based guidelines.

7.4 Research considerations

It was a challenge to access and engage both child participants and their parents in the process of securing pre-intervention consent. Schools also required encouragement to allow teachers opportunity to participate in pre-intervention training and to prioritise intervention delivery over and above other aspects of the curriculum. There were also challenges related to the financing of supply cover to schools to ensure staff attendance at pre-intervention training and for the purchasing of training delivery and intervention materials. The current study benefited from pre-existing interest in the local education authority, inclusive financial and material support. This provided additional impetus to ensure appropriate research standards were maintained (Greenberg et al, 2005; Perpletchikova et al, 2009). It meant that pre- and post-assessments could be consistently administered between settings; that a consistently high standard of pre-intervention teacher training could be assured and that all delivering teachers had the same ongoing access to technical support and advice. Furthermore, teachers in each condition were exposed to the same implementation checks throughout. The key point is that, in circumstances other than these, the issues described above could have presented fundamental challenges to the maintenance of acceptable research standards. This highlights the importance of securing the active support of schools, teachers and parents prior to embarking upon any new school-based intervention research. It also shows the importance of accessing appropriate resources before deciding whether or not any new school-based research is viable (Durlak & DuPre, 2008).

The researcher's authorship of Concentration had to be considered in pre-planning. Comparing two 'credible' interventions and using a realistic 'as normal' condition helped avoid building bias into the study design. Also, implementation procedures aimed to be scrupulous in achieving consistency between conditions. This involved careful process checks by academic supervisors as well as scripted interactions between participant and researcher. For example, standard pre-interview / focus group scripts and standard primary interview / focus group questions were used. An essentialist /realist model of objectively analysing all transcribed data was also employed, without attempts to subjectively generate codes or

themes. However, the risk of researcher bias cannot be eliminated in studies where the researcher's therapeutic orientation is represented in one of the main intervention conditions. It is also perhaps unrealistic to assume that it could be, when training in psychological intervention typically involves only one main modality (for example, CBT). Taking this in to account, it was considered important to provide clear and explicit recognition of a preferred therapeutic orientation but to explain how the risk of researcher bias was minimised.

Another consideration relates to the assumption of constancy between settings. This assumption was supported by the use of standard intervention manuals, pre-intervention training, teachers' self-scaling on session adherence, observation and post-intervention interviews. However, it remains important to acknowledge that different teachers may have displayed different interpersonal styles during intervention delivery (Pugh, 2010). They might also have delivered interventions in schools displaying different institutional ethos, school and class cultures. Therefore, it must be acknowledged that, whilst adherence procedures were carefully applied, the issues described above could have introduced some sources of variation between settings. This recognition invites further study of the role played by delivering practitioners in achieving successful intervention outcomes.

Contrary to prediction; children's questionnaires did not show any improvement to either taught coping strategies in FRIENDS CBT, empathic attitudes in Concentration PCT or self-belief in both. This may reflect limitations on the capacity of children to perceive and self-report subjective experience (Klein, 2009) and, in this sense; accurate self-reports may be contingent upon children's levels of development and learning (Harter, 1990; Stone et al, 1990). However, children in focus groups also failed to report the benefits of taught cognitive coping. This provides further support for the view that cognitive coping in CBT for child anxiety requires a more secure evidence-base if it is to be reliably considered a key mechanism through which CBT works (Prins & Ollendick, 2003). As with coping, empathic attitudes in Concentration PCT also failed to positively change between pre-to post-measures. However, children in Concentration PCT focus groups did express value at being able to communicate and to understand each other better (see Section 6.5) and this might be

considered a part proxy for empathic attitude. Nevertheless, the current study did not provide reliable evidence to show Concentration PCT improved empathic attitudes or that FRIENDS CBT improved children's coping skills. Likewise, it did not provide any evidence to suggest that any intervention had improved children's self-belief.

Lastly, the current study acknowledges that regression to the mean and time effects may have accounted for some of the variance between pre-to- post-anxiety measures. Regression to the mean is the statistical likelihood in test-re-tests for outlying pre-test scores to gravitate toward the mean score on the second measure. It also describes the likelihood for outlying post-test scores to gravitate toward the mean on the first measure. This was relevant to the current study, in which a significant minority of all children had reported baseline anxiety scores higher than the mean baseline score. Hence, this high anxiety group (SCAS > 42.48) was statistically more likely to move toward the mean on the second measure. Also, time effects had been observed in previous similar studies, in which children reported some reductions to anxiety symptoms between different time points without having received any intermediate intervention (Spence, 1998). The design of the current study helped control for these non-specific effects by using a curriculum as normal comparison from which to benchmark intervention effects. However, it is recognised that non-specific effects are a potential source of variance in intervention research. Hence, future intervention research should more carefully consider non-specific effects especially where a credible control condition has not been used.

7.5 Recommendations for future research

Inconclusive results invite further comparison between interventions to either identify their equivalent effectiveness or show differences between interventions. However, comparative studies in community samples require researchers to forego the prospect of always establishing the superiority of one main intervention over another. This is because comparisons between credible interventions are less likely to yield significant main differences (Prins & Ollendick, 2003). Notwithstanding this, equivalency between groups need not undermine the value of controlled comparison. Indeed, controlled comparison

between credible but different interventions can actually enhance our understanding of intervention effects by providing smaller but arguably more realistic distinctions between them (Jensen et al, 2005). In this way intervention selection can be better informed. Further recommended research might also involve longer-term follow-up at, for example, 6 or 12 months, to ascertain whether or not gains were maintained over time and to re-examine longer-term differential intervention effects. This would be useful, as previous longitudinal research has uncovered longer-term benefits of participation in universal preventative intervention (Bernstein et al, 2008).

This study showed that children reporting higher baseline anxiety scores significantly reduced risk-status between pre-to-post- measures. Despite these findings it is not clear whether high-risk children would have benefited more or less from receiving intervention alongside smaller groups of other at-risk children. Information from qualitative follow up suggests at-risk children did actually benefit from a positive whole class dynamic. This is because they valued communication with all classmates irrespective of their classmates risk status. However, this does not preclude the possibility that high-risk children may have felt more protected and more understood had they been placed in smaller groups with other at-risk children. Further research should therefore examine the respective benefits of whole-class versus small-group delivery to at-risk children.

Consideration might also be given to examining mechanisms of action by which interventions are thought to achieve intended goals, in this case, the reduction of anxiety symptoms. This type of research would be resource-intensive, in so far as several sequential measures of an outcome measure would have to be taken with several hypothesised process variables. It would be important to ensure hypothesised process variables were not solely drawn from theory-based approaches, for example CBT, and included other variables thought to more commonly influence research outcomes, for example, attention, positive regard, therapeutic relationship, as well as the frequency and intensity of delivery (Jensen et al., 2005). Application of this method could provide a more realistic understanding of intervention processes by showing, for example, that increased attention and better

relationships covaried in real-time with desired changes to an outcome measure such as reduction to symptoms of depression or anxiety.

Other useful research might include the study of gender preferences in social and emotional learning activity. This is because the current study suggested boys and especially at- risk boys preferred Concentration PCT to the other two interventions. A key question is whether the boys prefer social and emotional learning that is targeted at gender -specific learning and cognitive preferences. This possibility is illuminated by Concentration PCT components, which are less language driven and involve less didactic instruction than the other two groups. These may be some of the reasons why Concentration PCT might be more attractive to pre-adolescent boys who typically display lesser capacity than girls in these areas (Gurian et al, 2001).

It might also be useful to further establish the efficacy / effectiveness of Concentration PCT with smaller clinically-defined samples, for example, those displaying symptoms of an anxiety subtype such as social phobia. This type of research might answer more fully the question of whether or not Concentration PCT can be used to reduce anxiety symptoms in such samples. Although this type of research exists for FRIENDS CBT (Cartwright- Hatton et al, 2004; Compton et al, 2002), it does not exist for Concentration PCT.

7.6 Contribution to knowledge

The first part of this study compared two credible and theoretically- based interventions for reducing anxiety symptoms against a curriculum as normal comparison condition. Post-test results showed non-significant differences between conditions. There were also non-significant differences in the secondary outcome measures of coping, empathic attitude and self-belief. Hence, the main quantitative outcomes in this study were inconclusive. Intervention-specific gender effects were, however, found in Concentration PCT, with girls in the condition reducing anxiety symptoms significantly less than boys. This difference in performance suggests a gender-specific preference for different types of social and emotional learning activity.

The most intriguing outcomes in this study arose from qualitative follow-up using semi-structured teacher interviews and child focus groups. Interestingly, both teachers and children provided common rather than intervention-specific feedback. This feedback included, for example, a desire for improved classroom relationships, briefer and more frequently delivered intervention sessions, more interactive and experiential activity, less paper-pencil activity and less repetition. Child-specific concerns related to the sensitive use of personal information and the opportunity to develop better relationships with teachers. Although both teachers and children valued intervention manuals, their main concerns related to the quality rather than type of intervention delivered. Indeed, the only feedback distinguishing conditions related to the value of some intervention-specific components, for example, drawing in PCT; a teacher preference for the interactive, experiential quality of PCT training and some limited criticism of CBT for using too much paper-pencil activity and repetition.

The main issues outlined in this study have typically been identified elsewhere. For example, there is already recognition that girls may be better placed than boys to take advantage of social and emotional learning activity (Gurian et al, 2001), that classroom relationships are important to student functioning (Cornelius-White, 2007), that longer-term and more frequently delivered small-group SEAL sessions are potentially of more use (Lendrum et al, 2011) and that CBT may involve too much literacy and language-based activity (Bernstein et al, 2008). However, this study has provided teachers and children with a mechanism for feeding back these concerns in a moderately sized community-based study. It has also fundamentally shown that participants prioritise the quality rather than the type of intervention delivered and that perceived effects are more likely to be common rather than specific to any one-intervention type.

CHAPTER 8: Conclusion

There were non-significant differences between conditions in the primary outcome measure of anxiety and in the secondary outcome measures of coping, empathic attitude and self-belief. Despite non-significant results, the current study suggests that anxiety symptoms are likely to be common in childhood (Cartwright et al, 2006; Dadds & Barrett, 2001; Grover et al, 2005; Kendall et al, 2010; Spence, 1998) and that anxious children benefit from the provision of support (Dadds et al, 1997; 1999; Lowry-Webster et al, 2001, 2003). There is also further suggestion that girls and boys may benefit from different types of social and emotional learning activity. Qualitative analysis revealed positive agreement between teachers delivering FRIENDS CBT, Concentration PCT and previously at-risk children in all three groups. This type of feedback raises questions about the continued use of research designs that fail to consider the role of common and implementation effects in achieving successful outcomes. This is because intervention effects can only be reliably measured when there exists a credible comparison to control for these other effects. This means studies involving only one main intervention do not provide sufficient evidence to show that intervention gains have resulted from the theoretical model upon which the main intervention is based (Spielmans et al., 2007). This remains the case irrespective the number of times such a design is replicated (see Section 3.4). Also, a dichotomous understanding of psychological intervention as either empirically supported or not empirically supported tends to overlook the important question as to why an intervention is effective. (Prins & Ollendick, 2003; Kazdin & Knock, 2003; Weersing & Weisz, 2002) and also tends to discourage participant views from being actively sought. This provides a rationale for expanding the range and type of research into school-based intervention. This might include more research into the mechanisms of action by which interventions are considered to work. It might also mean closer examination of the roles played by implementation procedures and by common effects, such as the therapeutic competency of delivering teachers, the motivation of child participants and the classroom cultures to which both belong.

References

Ablon, J., Marci, C. (2004). Psychotherapy process: the missing link: comment on Westen, Novotny and Brenner. *Psychological Bulletin, 130,* 4, 664-668.

Ablon, J., & Jones.E. (2002). Validity of controlled trials of psychotherapy: findings from the NIMH treatment of depression collaborative research programme. *American Journal of Psychiatry, 159,* 775-783

American Psychological Association Task Force on Psychological Intervention Guidelines. (1995). *Template for developing guidelines: Interventions for mental disorders and psychological aspects of physical disorders.* Washington, DC: American Psychological Association.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (Revised 4th ed.). Washington, DC:

Amirkhan, J.H. (1990). A factor analytically derived measure of coping. The coping strategy indicator. *Journal of Personality and Social Psychology, 59*, 1066-1075.

Amirkhan, J.H. (1994). Criterion validity of a coping measure. *Journal of Personality Assessment, 62,* 242-261.

Amirkhan, J., Auyeng, B. (2007). Coping with stress across the lifespan: absoloute versus relative change in strategy. *Journal of Applied Developmental Psychology, 28,* 289-317.

Amstader, A., (2008). Emotion regulation and anxiety disorders. *Anxiety Disorders, 22,* 211-221.

Anderson, J. C., & & McGee, R. (1994). Comorbidity of depression in children and adolescents. In W. M. Reynolds & H. F. Johnson (Eds.), *Handbook of depression in children and adolescents,* 581-601. New York: Plenum.

Angold, A., Costello, E., Farmer, E., Burns, B., Erkanli, A. (1999). Impaired but undiagnosed. *Journal of the American Academy of Child and Adolescent Psychiatry, 38, 2,* 129-137.

APA Presidential Task Force on Evidence Based Practice, (2006). Evidence-Based

Practice in Psychology. *American Psychologist, 61, 4,* 271-285.

Attride-Sterling, (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research, 1,3,* 385-405.

Banerjee, R. (2010). *Social and emotional aspects of learning in schools: contributions to improving attainment, behaviour and attendance*. A report on the National Strategies tracker school project. University of Sussex.

Barrett, P.M., (1998). Evaluation of cognitive behavioural group treatment for childhood anxiety disorders. *Journal of Clinical and Child Psychology, 27, 4,* 459-468.

Barrett, P.M., Dadds, M.R., & Rapee, R.M. (1991). *Coping cola workbook, unpublished manuscript,* School of Applied Psychology, Griffith University, Nathan, Australia.

Barrett, P.M., Dadds, M.R., Rapee, R.M., & Ryan. S. (1996). Family based treatment of anxious children. *Journal of Consulting and Clinical Psychology, 64,* 333-342.

Barrett, P.M., Duffy, A.L., Dadds, M.R., & Rapee, R.M. (2001). Cognitive behavioural treatment of anxiety disorders in children: Long term (6 year) follow up. *Journal of Consulting and Clinical Psychology, 69,* 135-141.

Barrett, P.M., Lock, S., Farrell, L. (2005). Developmental differences in universal preventive intervention for child anxiety. *Clinical Child Psychology and Psychiatry, 10, 4,* 539-555.

Barrett, P.M., Lowry-Webster, H., & Turner, C. (2000a). *FRIENDS programme for Children: participants workbook*: Brisbane, Australian Academic Press

Barrett, P.M., Lowry-Webster, H., & Turner, C. (2000b). *FRIENDS programme for children: group leaders manual*: Brisbane, Australian Academic Press

Barrett, P., & Turner, C., (2001). Prevention of anxiety symptoms in primary school children: preliminary results from a universal school based trial. *British Journal of Clinical Psychology*, 40, 399-410.

Barrett, P.M. Farrell, L.J., Ollendick, T.H., Dadds, M. (2006). Long-term outcomes of

an australian universal prevention trial of anxiety and depression symptoms in children and youth: An evaluation of the FRIENDS program. *Journal of Clinical Child and Adolescent Psychology, 35, 3,* 403-411

Barrett Lennard, G.T. (1993). The phases and focus of empathy, *British Journal of Medical Psychology, 66,* 3-14.

Barrett Lennard, G.T. (1995). The recovery of empathy – toward others and self. In A.C. Bohart & L.S Greenberg (Eds.), *Empathy and psychotherapy: new directions to theory, research, and practice.* (pp. 11 – 23). Washington D.C: APA Books.

Barkham, M., Rees, A., Shapiro, D., Stiles, W., Agnew, R., Halstead. J., Culverwell, A., & Harrington V. (1996). Outcomes of time limited psychotherapy in applied settings: replicating the Second Sheffield Psychotherapy Project. *Journal of Consulting and Clinical Psychology, 64,* 1079-1085.

Bayer, J., Hiscock, H., Ukoumunne, O., Price, A., Wake, M. (2008). Early childhood aetiology of mental health problems: a longitudinal population based study. *Journal of Child* Psychology and Psychiatry, 49: 11, 1166-1174.

Beck, A.T., and Emery, G. (1985). *Anxiety disorders and phobias: a cognitive perspective.* New York: Basic Books.

Behr, M. & Becker, M. (2002). Interactive resonance work with children and adolescents. A theory based concept of interpersonal relationship through play and the use of toys. *Person Centered and Experiential Psychotherapies, 2,* 89-103.

Bernstein, G., Bernat, D., Victor, A., Layne, A. (2008). School based interventions for anxious children: 3-6and 12-month follow-ups. *Journal of the American Academy for Child and Adolescent Psychiatry, 47, 9,* 1039-1047.

Birmaher, B., Khetarpal, S., Brent. D., Cully, M., Balach. L., Kaufman, J., & McKenzie Neer, S. (1997). The Screen for Child Anxiety Related Emotional Disorder (SCARED): scale construction and psychometric characteristics. *Journal of the Americcaan Academy of Child and Adolescent Psychiatry, 36,4,* 545-553.

Biedel, D.C. (1991). Social phobia and overanxious disorder in school age children. *Journal of the American Academy of Child and Adolescent Psychiatry, 30,* 545-552.

Biedel, D.C., Turner, S.M., Morris, T.L. (2000). Behavioural treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68, 6,* 1072-1080.

Bittner, A., Egger, H., Erkanli, A., Costello, J., Foley, D., Angold, A. (2007). What do child anxiety disorders predict? *Journal of child psychology and psychiatry, 48, 12,* 1174-1183

Boyatizis, R.E. (1998) *Transforming qualitative information: thematic analysis and code development.* Sage.

Bor, W., McGee, T., Fagan, A. (2004). Early risk factor for adolescent antisocial behaviour. An Australian longitudinal study. *Australian and New Zeland Journal of Psychiatry, 38,* 365-372.

Braum, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Quantitative Research in Psychology, 3,* 77-101.

Briesch, A., Hagermoser-Sanetti, L., Briesch, J. (2010). Reducing the prevalence of anxiety in children and adolescents. An evaluation of the evidence base for the FRIENDS for Life Program. School Mental Health, 2, 155-165.

Brodzinsky, D.M., Elias, M.J., Steiger, C., Simon, J., Gill, M. & Clarke-Hitt, J. (1992). Coping scale for children and youth: scale development and validation. *Journal of Applied Developmental Psychology: 13,* 195-124.

Campbell, M.A., Rapee, R.M., (1996). Current issues in the assessment of anxiety in children and adolescents: A developmental perspective. *Behaviour Change, 13,* 185-193.

Cartwright- Hatton, S., Roberts, C., Chitsabesan, P., Fothergill, C., Harrington, R., (2004). Systematic review of the efficacy of cognitive behaviour therapies for childhood and adolescent anxiety disorders. *British Journal of Clinical Psychology, 43,* 421-436.

Cartwright-Hatton, S., McNicol, K., Doubleday, E., (2006). Anxiety in a neglected population: prevalence of anxiety disorders in pre adolescent children.

Clinical Psychology Review. 26, 817-833.

Chambless, D. L. (1996). In defense of dissemination of empirically supported psychological interventions. *Clinical Psychology: Science and Practice, 3,* 230-235.

Chambless, D. L. & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66,* 1, 7-18.

Chavira, D.A., Stein, M.B., Bailey, K., & Stein, M.T. (2004). Child anxiety in primary care: prevalent but untreated. *Depression and Anxiety, 20,4,* 155-164.

Chu, B.C., and Harrison, T. (2007). Disorder specific effects of CBT for anxious as opposed to depressed youth: a meta-analysis of candidate mediators of change. *Clinical Child and Family Review, 10, 4,* 352-372.

Cole, D.A., Truglio, R., & Peeke, L. (1997). Relation between symptoms of anxiety and depression in children. A multi-trait-multimethod-multi group assessment. *Journal of Consulting and Clinical Psychology, 65,* 110-119.

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. Second Edition. Hillsdale, NJ: Lawrence Erlbaum.

Compton, S., Burns, J., Egger, H., Robertson, E. (2002) Review of the evidence base for treatment of chid anxiety disorders. *Journal of Consulting and Clinical Psychology, 70, 6,* 1240-1266.

Compton, S., March, J., Brent, D.B., Albano, A.M., Weersing, R., & Curry, J. (2004). Cognitive behavioural psychotherapy for anxiety and depressive disorders in childrenand adolescents: an evidence based review. *Journal of the American Academy of Child and Adolescent Psychiatry, 43, 8,* 930-959.

Conway, A. (1997). Incorporating focusing in to the classroom, *The Folio, 16,* 1-2.

Cooper, M. (2004). *Counselling in Schools Project: Evaluation Report.* Glasgow: Counselling Unit, University of Stratchclyde.

Cooper, M. (2006) *Analysis of the evaluation data. In East Renfrewshire Youth Counselling Service (ERYCS): Development and Evaluation of a full time secondary school and community based youth counseling service in Scotland 2005.* East

Renfrewshire Council.

Cornelius-White, J. (2007). Learner centred teacher student relationships are effective: a meta-analyisis. *Review of Educational Research: 77,:* 1, 113-143.

Costello, E.J., Mustillo., S, Erkanli., A., Keeler, G., Angold, A. (2003). Prevalence and development of anxiety disorders in childhood and adolescence. *Archives of General Psychiatry, 53,* 1129-1136.

Craig, C. (2009). Wellbeing in schools: the curious case of the tail wagging the dog? Centre for confidence and wellbeing <www.centrefor confidence.co.uk>

Crandall, V., (1975). A children's social desirability questionnaire for children. *Journal of Consulting Psychology, 29,* 28-36.

Creed, T., Kendall, P.C., (2005). Therapist alliance building behaviour within a cognitive-behavioural treatment for anxiety in youth. *Journal of Consulting and Clinical Psychology, 73, 3,* 498-505.

Chris-Christoph, P. (1991). Meta-analysis of therapist effects in psychotherapy outcome studies. *Psychotherapy Research, 1, 2,* 81-91.

Crits-Christoph, P., Hollon, S., Wilson, G.T. (2004). Empirically supported psychotherapies: comment on Westen, Novotny and Thompson Brenner. *Psychological Bulletin, 131, 3,* 412-417.

Curry, J., Murphy, L.B. (1995). Comorbidity of anxiety disorders. In J.S. March (Ed.), *Anxiety disorders in children and adolescents* (pp. 301-320). New York: Guilford Press

Dadds, M.R., Rapee, R.M., Barrett, P.M. (1994). Behavioural observations. In T.H. Ollendick, N.J. King, and W. Yule (Eds.), *International handbook of phobic and anxiety disorders in children and adolescents,* (pp 331-347).

Dadds, M.R., Spence, S.H., Holland, D., Barrett, P.M.& Laurens, K. (1997). Prevention and early intervention for anxiety disorders: a controlled trial. *Journal of Consulting and Clinical Psychology, 65,* 627-635.

Dadds, M., Perrin, S., Yule, W. (1998). Social desirability and self reported anxiety in

children. An analysis of the RCMAS Lie scale. *Journal of Abnormal Child Psychology.26,4,* 311-317.

Dadds, M.R., Spence, S.H., Laurens, K., Mullins, M., Barrett, P.M., (1999). Early intervention and prevention of anxiety disorders in children: Results at 2-year follow up. *Journal of Consulting and Clinical Psychology, 67,* 145-150.

Dadds, R., Barrett, P.M (2001). Practitioner review: psychological management of anxiety disorders in childhood. *Journal of Child Psychology and Psychiatry, 42, 8,* 999-1011

Dadds, M.R. (2001). Fads, politics and research: keeping prevention on the mental health agenda, *Prevention and Treatment, 4, 1.*np.

De Los Reyes,A., Kazdin, A. (2008). When the evidence says, 'yes, no, and maybe so' attending to and interpreting inconsistent findings among evidence based interventions. *Currrent Directions in Psychological Science, 17,1,* 47-51.

Department for Children, Schools and Families, (2005). *Social and Emotional Aspects of Learning: Improving Behaviour (SEAL): Improving Learning*.

Department for Children, Schools and Families, (2008). *Targeted Mental Health in Schools Programme (TaMHS) Evidence based guidance booklet.*

Doll, B., Champion, A., & Kurien, S. (2008, February). *Social and psychological context for high quality classrooms.* A poster presented at the 2008 Annual Convention of the National Association of School Psychologists, New Orleans.

Doll, B., Kurien, S., LeClair, C., Spies, R., Champion, A., & Osborn, A. (2009) The ClassMaps Survey: A framework for promoting positive classroom environments. In R. Gilman, S. Huebner, and M. Furlong (Eds.), *Handbook of positive psychology in the schools.* New York: Routledge.

Doll, B., & Siemers, E. (2004, April). *Assessing instructional climates: The reliability and validity of ClassMaps.* A poster presented at the annual convention of the National Association of School Psychologists, Dallas, TX.

Doll, B., & Spies, R. A. (2007, March). The ClassMaps Survey. A paper presented at

the Annual Convention of the National Association of School Psychologists, New York.

Doll, B., Spies, R., LeClair, C., & Kurien, S. (2008). *Assessing classroom learning environments.* Manuscript under submission.

Doll, B., Spies, R., Strasil, E., LeClair, C., Fleissner, S., & Kurien, S. (2006, March). *Successful student study: precursors to academic, social and behavioral success.* A paper presented at the Annual Convention of the National Association of School Psychologists, Anaheim, CA.

Doll, B., Zucker, S., & Brehm, K. (2004.) Resilient classrooms: Creating healthy environments for learning. *A text in the series: Practical Interventions in Schools.* New York: Guilford Publications.

Durlak, J., DuPre, E. (2008). Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41,* 327-350.

Elliottt, R., Zucconici, A. (2006). Research on the effectiveness of psychotherapy and psychotherapy training: a person centered experiential perspective. *Person Centered and Experiential Psychotherapies, 5, 2,* 20-99.

Emanuel, R. (2006). Child and adolescent psychotherapy: In Bloch, S (Ed.), *An Introduction to Psychotherapies,* (pp 309-331), NY, US: Oxford University Press.

Essau, C.A., Sasagawa, S., Anastassiou-Hadjicharlambous., Olaya Guzman, B., Ollendick, T.H. (2010). Psychometric properties of the Spence anxiety scale with adolescents from five European countries. *Journal of Anxiety Disorders* (in press)

Essau. C.A., Sakano. Y., Ishikawa, S., Sasagwa. S. (2004). Anxiety symptoms in Japanese and in German children. *Behaviour Research and Therapy, 42,* 601-612.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.

Farrell, J., Barrett, P.M. (2007). Prevention of childhood emotional disorders:

reducing the burden of suffering associated with anxiety and depression. *Child and adolescent mental health, 12,2,*58-65.

Ferdinand, R.F., van Lang, N., Ormel, J., Verhulst, F.C. (2006). No distinctions between different types of anxiety symptoms in pre adolescents from the general population. *Anxiety Disorders, 20,* 207-221.

Fisak, B., Richard, D., Man, A. (2011). The prevention of child and adolescent anxiety. A meta-analytic view. Society for Prevention Research (Published Online).

Fong , G., and Garralda, E. (2005). Anxiety disorders in children and adolescents, *Psychiatry, 4, 8,* 77-81.

Fonagy, P., Target, M., Cotrell, D., Philips, J., & Kurtz, Z. (2005). *What works for whom? A critical review of treatments for children and adolescents.* Hove: The Guidford Press.

Funk, J., Fox, C., Chan, M., Curtiss, K. (2008). The development of the Children's empathic attitudes questionnaire using classical and Rasch analyses. *Journal of Applied Developmental Psychology, 29, 3,* 187-196.

Garaigordobil, M., de Gaideano, P.G., (2006). Empathy in children aged 10-12, *Psicothema, 18, 2,* 180-186.

Gendlin, E.T. (1980). Imagery is more powerful with focusing: Theory and practice. In J.E. Shorr, G.E. Sobel, P.Robin, J.A. Conella (Eds.), *Imagery. Its many dimensions and applications* (pp.65-73). New York: Plenum Press
Also available at: http: //www.focusing.org/fot/gendelin imagery.html

Gendlin, E.T. (1981). *Focusing*. NY: Bantam.

Gibson, F. (2007). Conducting focus groups with children ad young people: strategies for success. *Journal of Research in Nursing, 12,* 473-483.

Gillham, J., Shatte, A., Reivich, K., (2001). Needed for prevention research: Long –t term follow up and the evaluation of mediators, moderators and lay providers. *Prevention and Treatment, 4,1.*np

Gillham, Shatte, Reivich (2001). Needed for prevention research: long term-follow up

and the evaluation of mediators, moderators and lay providers. *Prevention and Treatment, 2, 1*.np

Goodwin, R., Ferguson, D.M., Horwood, J. (2004). Early anxious / withdrawn behaviours predict later internalising disorder. *Journal of Child Psychology and Psychiatry, 45, 4,* 874-883.

Grave. J., and Blissett, J. (2004). Is cognitive behaviour therapy developmentally appropriate for young children? A critical review of the evidence. *Clinical Psychology Review, 24, 4,*399-420.

Greene, J.C., Garaceli, V.J., & Graham, W.F. (1989). Toward a conceptual framework for mixed method evaluation designs. *Educational Evaluation and Policy Analysis, 11*, 255-273.

Greenberg, M.T., Domitrovich, C., Bumbarger, B. (1999). *Preventing mental health disorder in school age children. A review of the effectiveness of prevention programs. Centre for Mental Health Services (CMHS),* US. Department of Health and Human Services, Washington, DC.

Greenberg, M.A., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school aged children: current state of the field. prevention and treatment, 4, 1: http://journals .apa.org/prevention/volume4/pre004001a.html

Greenberg, P.E., Sisitsky, T.,Kessler, R.C., Finkelstein, S.N., Berndt, E.R., Davidson, J.R., Ballenger, J.C., & Fyer, A.J. (1999). The economic burden of anxiety in the 1990's. *The Journal of Clinical Psychiatry, 60, 7,* 427-435.

Greenberg, M.T. Domitrovich, C.E. Graczyk, P.A. & Zins, J.E. (2005) .The study of implementation in school-based preventive interventions: *Theory, Research and Practice (Vol 3).*

Grossman**,** P., Niemann**,** L., Schmidt**,** S. & Walach, H. (2004)**.** Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57,* 35-43.

Grover, R.L., Ginsburg, G., Ialongo, N. (2005). Childhood predictors of anxiety symptoms: a

longitudinal study. *Child Psychiatry and Human Development, 36, 2,* 133- 153.

Haaga, D., (2004). A healthy dose of criticism for randomised controlled trials: comments on Westen, Novotny, and Thompson –Brenner. *Psychological Bulletin, 130, 4,* 674-676.

Hale, W., Raaijmakers, Q., Muris, P., van Hoof, A., Meeus, W. (2005). Psychometric properties of the screen for child anxiety related disorders (SCARED) in a general adolescent popultion. *Journal of the American Academy of Child and Adolescent Psychiatr, 44,* 283-290.

Hale, W., Raaijmakers, Q., Muris, P., van Hoof, A., & Meeus, W. (2008). *Journal of the American Academy of Child and Adolescent Psychiatry, 47, 5,* 556-564.

Hallame, R., Rhamie, J., Shaw, J. (2006). Evaluation of the primary behaviour and attendance pilot. (Department for Education and Skills)

Harter, S., (1990). Issues in the assessment of self-concept in children and adolescents. In A.M. La Greca (Ed.), *Through the eyes of the child: obtaining self reports from children and adolescents,* (pp.292-325): Boston: Allyn and Bacon.

Harris, B., Pattison, S (2006). Adding value to education through improved mental health: A review of the research evidence on the effectiveness of counselling for children and young people, *The Australian Educational Researcher, 33, 2,* 97 - 121.

Hedges, L.V. & Hedberg, E.C. (2007). Interclass correlation values for planning group-radomised trials in education. Educational Evaluation and Policy Analysis, *29, 1,* 60-87.

Helzer, J., Kraemer, H., Krueger, R., Wittchen, H., Sirovatka, P., Reiger, D. (2008). *Dimensional approaches in diagnostic classification: refining the research agenda for DSM-V.* Washington DC: American Psychiatric Association.

Hogarty G,E., Schooler N.R., & Baker R.W. (1997). Efficacy versus effectiveness *Psychiatric Services, 48,1107*

Horowitz J.L., Garber, J., Ciesla, A.,Young, J.F., Mufson, L. (2007). Prevention of

depressive symptoms in adolescents: a randomised trial of cognitive behavioural and interpersonal prevention programs. *Journal of Consulting and Clinical Psychology, 75,5*, 693-706.

Hudson, J.L., Rapee,. R.M., Deveney, C., Schniering, C.A., Lyneham, H.J. (2009). Cognitive behavioural treatment versus an active control for children and adolescents with anxiety disorders: a randomised controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 48,* 5, 533-544.

Hughes, A., Hedtke, K., Kendall, P., (2008). Family functioning in families of children with anxiety disorders. *Journal of Family Psychology*, 22, 2, 325-328.

Humphrey, N., Kalambouka, A., Bolton, J., Lendrum, A., Wigelsworth, H., Lennie, C. & Farrell, P. (2008). *Primary social and emotional aspects of learning (SEAL). Evaluation of small group-work.* School of Education, University of Manchester.

Humphrey, N., Kalambouka, A., Wigelsworth, M., Lendrum, A., Lennie, C. & Farrell, P. (2010). New beginnings: evaluation of a short social-emotional intervention for primary-aged children. Educational Psychology, *30, 5,* 513-532.

Humphrey, N., Lendrum, A., & Wigelsworth, M. (2010). *Social and emotional aspects of learning (SEAL) programme in secondary schools: national evaluation.* Department for Education.

Ishikawa, S., Sato, H., & Sasagawa, S. (2009). Anxiety disorder symptoms in Japanese children and adolescents. *Journal of Anxiety Disorders, 23,* 104-111.

Jennings, P., Greenberg, M. (2009). The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79,* 1, 491-525.

Jensen, S., Weersing, R., Hoagwood, K. E., & Goldman, E. (2005). What is the evidence for evidence based treatments? A hard look at our soft underbelly. *Mental Health Services Research , 7, 1,* 53-74.

Kazdin A.E., (2002) The state of child and adolescent psychotherapy research. *Child and Adolescent Mental Health. 7, 2,* 53-59

Kazdin, A., Knock, M. (2003). Delineating mechanisms of change in child and adolescent therapy: methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry, 44, 8*, 116-1129.

Kendall, P.C. (1990). *The coping cat workbook.* Ardmore, PA: Workbook Publishing.

Kendall, P. C. (1993). Cognitive behavioural therapies with youth: guiding theory, current status, and emerging developments. Journal of consulting and clinical psychology, 612, 235-47.

Kendall, P. C. (1994). Treating anxiety disorders in children: results of a randomised clinical trial. *Journal of consulting and clinical psychology. 62, 1,* 100-10.

Kendall, P.C., Compton, S., Walkup, J., Birmaher, B., et al. (2010). Clinical characteristics of anxiety disordered youth. *Journal of Anxiety Disorders, 24,* 360-365

Kendall, P. C., Flannery-Schroeder E., Panichelli-Mindel S. M., Southam-Gerow M., Henin A., & Warman, M. (1997). Therapy for youths with anxiety disorders: a second randomised trial. *Journal of consulting and clinical psychology, 65, 3,* 366-80.

Kendall, P.C., & Hedtke, K,A. (2006). *Coping cat workbook (2nd Ed.).* Ardmore. PA: workbook Publishing.

Kendall, P., Hudson, J., Gosch, E., Flannery- Schroeder, E., Suveg, C. (2008). Cognitive behaviour therapy for anxiety disordered youth: a randomised clinical trial evaluating child and family modalities. *Journal of Consulting and Clinical Psychology, 76, 2,* 282-297.

Kendall, P., Treadwell, K. (2007). The role of self-statements as a mediator in treatment for youth with anxiety disorders. *Journal of Consulting and Clinical Psychology, 75, 3,* 380-389.

King N J. Gullone, E. Ollendick, T (1992). Manifest anxiety and fearfulness in children and adolescents. *Journal of Paediatrics and Child Health 28, 5,* 47-50.

Kimber, B., Sandell, R., Bremberg, S. (2008). Social and emotional training in swedish classrooms for the promotion of mental health: results from an effectiveness study in sweden. *Health Promotion International, 23,2*, 134-143.

Kiscelia, M.S. (2001). Overcoming barriers to the practice of primary prevention: an agenda for the mental health professions. *Prevention and treatment, 4,1*.np.

Kirschenbaum, H. & Jourdan, A. (2005). The current status of Carl Rogers and the person cantered approach. Psychotherapy: *Theory, Research, Practice, Training, 42, 1,* 37-51.

Klein, (2009): CBT superior to waitlist controls but not credible controls in children with anxiety disorder. *Journal of Child Psychology and Psychiatry, 50, 1-2,* 153-162.

Kovacs, M. (1981). Rating Scales to assess depression in school aged children. *Acta Paedopsychiatrica, 46,* 305-315.

Kraag, G., Zeegers, M.P., Kok, G., Hosman, C., Abu-Saad, H. (2006). School programs targeting stress management in children and adolescents: a meta-analysis. *Journal of School Psychology, 44,* 449-472.

Lahey, B., Waldman, I., Hankin, B., Applegate, B., Loft, J.D., Rick, J., (2004). The structure of child and adolescent psychopathology: generating new hypothesis. *Journal of Abnormal Psychology, 113, 3,* 358-385.

Levant, R. (2005). *Report of the 2005 Presidential Task Force on Evidence Based Practice.* American Psychological Association.

Lendrum, A., Humphrey, N., Kalambouka, A., Wigelsworth, M. (2009). Implementing primary social and emotional aspects of learning (SEAL) small group interventions: recommendations for practitioners. Emotional and behavioural difficulties, *14, 3,* 229-238.

Lock, S. & Barrett, P. M. (2003). A Longitudinal study of developmental differences in universal preventative intervention for child anxiety. *Behaviour Change: 20, 4,* 183-199.

Lonnigan, C., Philips, B., Hooe, E. (2003). Relations of positive and negative affectivity to anxiety and depression in children: evidence from a latent variable longitudinal study. *Journal Of Consulting and Clinical Psychology, 71, 3,* 465-481.

Lohaus, A., & Klein-Hebling. (2000). Coping in childhood: a comparative evaluation of

different relaxation techniques. *Anxiety, Stress and Coping, 13, 2,* 187-211.

Lownau, H. (1969). Association drawing in the psychotherapeutic treatment of children and youths. *Praxis der Kinderpsychologie und kinderpsychiatrie, 18, 7,* 241-254.

Lowry-Webster, H.M., Barrett, P.M., & Dadds, M.R. (2001). A Universal prevention trial of anxiety and depressive symtomatology in childhood: Preliminary data from an Australian study, *Behaviour Change, 18,* 36-50.

Lowry-Webster, H.M., Barrett, P.M., & Lock, S. (2003). A universal preventative trial of anxiety symptomatology during childhood. Preliminary data from an Australian study. *Behaviour Change, 1,* 36-50.

Mearns, D. & Thorne, B. (2000). *Person Centred Therapy Today.* London: Sage.

Mellon, R.C., Moutavelis, A.G. (2007). Structure, developmental course, and correlates of children's anxiety disorder-related behaviour in a Hellenic sample. *Journal of Anxiety Disorders, 21,* 1-21.

Miller, L.D. (2008). Facing fears: the feasibility of anxiety universal prevention efforts with children and adolescents. *Cognitive and Behavioural Practice, 15,* 28-35.

Miles, M., Huberman, M. (1984). *Qualitative Data Analysis: A Sourcebook of New Methods.* London, Sage

Mnassis, K., Medlowitz, S.L., Scapillato, D., Avery, D., Fiksenbaum, L., Freire,

Moore, P.S.,Whaley, S., Sigman. M. (2004). Interactions between mothers and children: impacts of maternal and child anxiety. *Journal of Abnormal Psychology, 113,3,* 471-476.

Mrazek, P.J., and Haggerty, R.J. (1994). *Reducing risks for mental disorder: frontiers for preventive intervention research.* Washington, DC: National Academy Press.

Muiris, P., Meesters, C., & Noops, M. (2005). The relation between gender role orientation and fear and anxiety in non-clinic referred children. *Journal of Clinical Child and Adolescent* Psychology*, 34, 2,* 326-332.

Muris, P, Schmidt, H, Merckelbach, H. (2000). Correlations among two self report

questionnaires for measuring DSM-defined anxiety disorder symptoms in children: the screen for child anxiety related emotional disorders and the Spence Children's anxiety scale. *Personality and Individual Differences, 28,* 333-346.

National institute for health and clinical excellence: NICE, (2008). NICE Public Health Guidance 12. *Promoting children's social and emotional learning in primary school.*

Nauta, M.H., Scholing, A., Rapee., R.M., Abbott, M., Spence., S.H. Waters, A., et al. (2004). A parent report version of children's anxiety: psychometric properties and comparisons with child report in a clinic and normal sample. *Behvaviour Research and Therapy, 42,* 813-839.

Nickolite, A. & Doll, B. (2008). Resilience applied in schools: strengthening classroom environments for learning. *Canadian Journal of School Psychology: 23, 1,* 94-113.

Nikolaenko, N.N., Afans'ev, S.V., & Frolova, T.V. (2004). Gender differences in verbal learning of 5-to 15 years old children and adolescents. *Doklady Biological Sciences, 403,* 247-249.

Olfson, M., Gameroff, M.J., Marcus, S.C., Waslick, B.D. (2003). Outpatient treatment in child and adolescent depression in the united states. *Archives of General Psychiatry, 60,* 1236-1242.

Parker, D., Evangelou, E., Eaton, C. (2005). Interclass correlation coefficients for cluster randomised trials in primary care. The cholesterol education and research trial (CEART). Contemporary Clinical Trials, *26*, 260-267.

Paul, K. (2005). *SchoolMaps: A reliability and validity study for a secondary education school climate instrument.* Unpublished doctoral dissertation, University of Nebraska Lincoln.

Perpepletchikova, F., Treat, T.A. Kazdin, A.E. (2007). Treatment integrity in psychotherapy research: analysis of the studies and examination of associated factors. *Journal of Consulting and Clinical Psychology, 75,6,* 829-841.

Perepletchikova, Cherji, E., Hilt, L., Kazdin, A.E. (2009). Barriers to implementing

treatment integrity procedures: survey of treatment outcome researchers. *Journal of Consulting and Clinical Psychology, 77, 2,* 212-218.

Phoebe, S., Whaley, S., Sigman, M., (2004). Interactions between mothers and children: impacts of maternal and child anxiety. *Journal of Abnormal Psychology, 113, 3,* 471-476.

Pine, D.S., Costello, J., Dahl, R., James, R., Leckman, J. et al. (2010). Mood and anxiety program, national institute of mental health intramural research program. Increasing the developmental focus in DSM-V: broad issues and special applications in anxiety, *American Psychiatric Association.* 1-25.

Prince-Embury, S. (2006). *Resiliency Scales For Children and Adolescents. A Profile of Personal Strengths.* San Antonio, TX: Harcourt Assessment.

Prince-Embury, S. (2007). *Resiliency scales for children and adolescents: a profile of personal strengths.* San Antonio, TX: Harcourt Assessment Inc. Canadian Journal of School Psychology: 22, 2 (255-261).

Prince-Embery, S. & Courville, T. (2008). Measurement invariance of the resiliency scales for children and adolescents with respect to sex and age cohorts. *Canadian Journal of School Psychology: 23, 1,* 26-40.

Prince-Embury, S. (2008a). The resiliency scales for children and adolescents, psychological scales and clinical status in adolescents. *Canadian Journal of School Psychology: 23,* 41-56.

Prince-Embury, S. (2008b). Translating resiliency theory for assessment and application in schools. *Canadian Journal of School Psychology: 23,1,* 4-10.

Prins, P., & Ollendick, T. (2003). Cognitive change and enhanced coping: missing mediational links in cognitive behaviour therapy with anxiety disorder. *Clinical child and family psychology review, 6, 2,* 87-100.

Pugh, J. (2009). *The Concentration Programme*. Unpublished Manual for anxiety prevention.

Rapee, R. M, Barrett, P. M., Dadds, M. R., & Evans, L. (1994). Reliability of the DSM-III-K

childhood anxiety disorders using structured interview: Interrater and parent-child agreement. *Journal of the American Academy of Child and Adolescent Psychiatry, 33,* 984-992.

Reynolds, C.R., Richmond, B.O. (1978). What I Think and Feel: a revised measure of child's manifest anxiety. *Journal of Abnormal Child Psychology, 6,* 271-280.

Rogers, C. (1951). *Client Centred Thearpy:* Boston Houghton Mifflin. 481- 533.

Rogers, C., (1959). A Theory of Therapy, personality and Interpersonal relationships, as developed in the client-centered frameworks: In Koch, S (Ed). *Psychology: A Study of a Science. Volume 3. Formulations of the Person and the Social Context:* New York: McGraw-Hill, 1959, pp. 184-256.

Rogers, C. (1961). *A Therapists View of Psychotherapy: On Becoming A Person.* London: Constable. (Ch.3, 7, 9, 11)

Rogers. C. (1990). (Eds). Kitchenbaum. H. & Henderson. V. *The Carl Rogers Reader.* London: Constable. 219 –235.

Rotter, J.C., Horak, Jr., Robert, A., & Heidt, H.M. (1999). Incorporating children's drawings as early recollections in Adlerian psychotherapy. *Journal of Individual Psychology, 55, 3,* 316-327.

Rubin, K., Nelson, L., Hastings, P., Asendorf, J. (1999). The transaction between parent's perceptions of their children's shyness and their parenting styles. *International Journal of Behavioural Development, 23,* 937-957.

Schafer, J.L., Graham, J.W. (2002). Missing Data: Our View of the State of the Art. *Psychological Methods, 7, 2,* 147-177.

Schniering, J., Hudson, J., Rapee, R. (2000). Issues in diagnosis and assessment of anxiety disorders in children and adolescents. *Clinical Psychology Review, 20, 4,* 453-478.

Semple, R.J., Reid, E., Miller, L. (2005). Treating anxiety with mindfulness: an open trial of mindfulness training for anxious children, *Journal of Cognitive Psychotherapy: An International Quarterly, 19, 4,* 379-392.

Shaffer, D., Schwab-Stone, M., Fisher, P.W., Cohen, P., Piacentini, J., Davies, M., Conners, C.K., & Reiger, D. (1993). The Diagnostic Interview Schedule for Children-Revised Version (DISC-R): I. preparation, field-testing, interrater reliability, and acceptability. *Journal of the American Academy of Child and Adult Psychiatry, 33,* 80-93.

Shirk, S.R., Karver, M. (2003). Prediction of treatment outcome from relationship variables in child and adolescent therapy: a meta-analytic review, 71,3,452-464.

Shortt, A.L., Barrett, P.M., & Fox, T.L. (2001). Evaluating the FRIENDS program: A cognitive behavioural group treatment for anxious children and their parents. *Journal of Clinical Child Psychology, 30,* 525-535.

Silverman, W.K., & Albano, A.M. (1996). *Manual for the Anxiety Disorders Interview Schedule for DSM-IV: Chid Version,* Alany, NY: Graywind Publications.

Southam-Gerow, A., Chorpita, B. (2007). Anxiety in children and adolescents. In E. J. Mash & R.A. Barkley (Eds.), *Assessment of childhood anxiety disorders, 4th Edition,* (pp.347-397), The Guilford Press, New York.

Spiroto, A. (1996). Commentary: pitfalls in the use brief screening measures of coping. *Journal of Pediatric Psychology: 21, 4,* 573-575.

Spence, S.H. (1997). The structure of anxiety symptoms among children: a confirmatory factor analytic study: *Journal of Abnormal Psychology. 106,* 280-297.

Spence, S. H., (1998). A measure of anxiety symptoms among children. Behaviour *Research and Therapy: 36,* 545 – 566.

Spence, S.H., (2001). Prevention strategies In: M.W. Vasey & M.R, Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 325-351). New York, NY: Oxford University Press.

Spence, S. H., Barrett, P.M., Turner, C.M. (2003). Psychometric properties of the Spence children's anxiety scale with young adolescents. *Anxiety Disorders, 17,* 605-625.

Spielmans, G., Pasek, L.F., McFall, J.P. (2007). What are the active ingredients in

cognitive and behavioural therapy for anxious and depressed children? A meta-analytic review. *Clinical Psychology Review, 27,* 642-654.

Spielberger, C.D. (1973). *Manual for the State-Trait Anxiety Inventory for Children.* Palo Alta: Consulting Psychologists Press.

Stallard, P., Simpson, N., Anderson, S., Carter, T., Osborn, C. & Bush, S. (2005). An evaluation of the FRIENDS programme: a cognitive behavioural therapy intervention to promote emotional resilience. *Archives of Disease in Childhood: 90,* 1016-1019.

Stallard, P., Simpson, N., Anderson, S., Goddard, M. (2007). The FRIENDS emotional health prevention programme: 12 month follow-up of a universal UK school based trial. *European Journal of Child and Adolescent Psychiatry, 17, 5,* 283-289.

Stapert, M. (1997). Focusing in school. *The Folio, 16,* 1-2

Stiles, W.B., Shapiro, D.A. & Elliott, R. (1986). "Are all psychotherapies equivalent?" *American Psychologist, 41,* 165-180.

Stiles. W.B., Barkham, M.,Twigg, E.,Mellor-Clark, J., & Cooper, M. (2006). Effectiveness of cognitive behavioural, person centred and psychodynamic therapies as practiced in U.K. health service settings. *Psychological Medicine, 36,* 555-566.

Stone , W.L., and Lemaneck, K.L., (1990). Developmental issues in children's self reports. In A.M. La Greca (Ed.), *Through the eyes of a child: obtaining self reports from children and adolescents* (18-56). Boston: Allyn Bacon

Sugawara, M., Mukai, T., Kitamura, T., Toda, T., Shima, S., Tomoda, A., et al. (1999). Psychiatric disorders among Japanese children. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 4, 444-452.

Suveg, C., Hudson, J.L., Brewer, G., Flannery-Scroeder, E., Gosch, E., Kendal, P.C. (2009). Cognitive behavioural therapy for anxiety disordered youth: secondary outcomes from a randomised controlled trial evaluating child and family modalities. *Journal of Anxiety Disorders, 23,* 341-349.

Targeted Mental Health in Schools Grant Project (TaMHS) - Evidence-Based Guidance Booklet, DCSF, 2008.

Thapar, A., Rice, F. (2006). Twin studies in pediatric depression. *Child Adolescent Psychiatry, Clin.N. Am. 15,* 869-881.

Thompson, M., Gauntlett-Gilbert, J. (2009). Mindfulness with children and adolescents: effective clinical applications. *Clinical Child Psychology and Psychiatry, 13,* 395-407.

Torrey, A., Kendall, P. (2005). Therapist alliance-building behaviour within a cognitive- behavioural treatment for anxiety n youth. Journal of Consulting and *Clinical Psychology, 73, 3,* 498-505.

Treadwell, K., Kendall, P. (1996). Self talk in youth anxiety disorders: state of mind, content specificity, and treatment outcome. *Journal of Consulting and Clinical Psychology, 64, 5,* 941-950.

Twenge, J.M. (2000). The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. Journal of Personality and Social Psychology, 79, 6, np

Velting, O., Setzer, J., Albano, A. (2004). Update on advances in assessment and cognitive behavioural treatment of anxiety disorders in children and adolescents. *Professional Psychology: Research and Practice, 35, 1,* 42-54.

Verduin, T.L., & Kendall, P.C. (2003). Differentiated occurrence of comorbidity within childhood anxiety disorders. *Journal of Clinical Child and adult psychology, 32,* 290-295.

Waehler, C.A., Kalodner, C.R., Wampold, B.E., Lichtenberg, J.W., (2000). Empirically supported treatments (ESTs) in perspective : implications for counselling psychology training. *The Counselling psychologist, 28,* 657.671.

Wall, R.B., (2005). Tai chi and midfulness-based stress reduction in a Boston public school. *Journal of Pediatric Health Care, 19, 4,* 230-237.

Wampold, B., (2001). *The Great Psychotherapy Debate: Models, Methods and Findings.* Lawrence Erlbaum Associates. New Jersey.

Wampold, B. E., & Brown, G. S. (2005). Estimating therapist variability: A naturalistic study of outcomes in managed care. *Journal of Consulting and Clinical Psychology, 73,* 914 -923

Wampold, B., Lichtenberg, J.W., and Waehler, C. (2002). Principles of empirically supported interventions in counselling psychology. *The Counselling Psychologist, 30,* 197-217.

Weare, K & Markham, W. (2005). What do we know about promoting mental health through schools? Promotion & Education*, 12, 34*, 14-18.

Weersing, R., Weisz, J. (2002). Mechanisms of action in youth psychotherapy. Journal of child psychology and psychiatry, 43,1,3-29.

Weisz, J., Jensen, A., & McLeod, B. (2005). Development and dissemination of child and adolescent psychotherapies: Milestones, methods and a new deployment-focused model. In E. D. Hibbs, & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice (2nd ed.).* Washington, DC: American Psychological Association

Weisz, Sandler, I., Durlak, J., Anton, B. (2005). Promoting and protecting youth mental health through evidence based prevention and treatment. *American Psychologist, 60, 6,* 628-648.

Westen, D., Novotny, C. & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: Assumptions, findings and reporting in controlled clinical trials. *Psychological Bulletin, 130, 4,* 631-663.

Westen, D., Brenner, H.T., & Novotny, C.M., (2005). EBP =EST: reply to Chris-Christoph et al. (2005) and Weisz (2005). *Psychological Bulletin,131, 3,* 427-433.

Whiteside, P. & Brown, A. M., (2008). Exploring the utility of the Spence Children's Anxiety Scales parent- and child- report forms in a North American sample. *Journal of Anxiety Disorders, 22,8,* 1440-1446.

Wigelsworth, M., Humphrey, N., Kalambouka, A. & Lendrum A. (2010). A review of key issues in the measurement of children's social and emotional skills. Educational

Psychology in Practice, *26,2,* 173-186

World Health Organisation, (1994). *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*: Access online.

Wood, J., McCleod, B., Sigman, M., Hwang, W., & Chu, B., (2003). Parenting and childhood anxiety: Theory, empirical findings and future directions. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 44,* 134-151.

Wood, J. (2006). Effect of anxiety reduction on children's school performance and social adjustment. *Developmental Psychology, 42, 2,* 345-349.

Woodward, L., Ferguson, D.M., (2001). Life course outcomes of young people with anxiety disorders in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 40,* 1086-1093.

Zahn-Waxler, C., and Robinson, J., (1995). Empathy and guilt: early origins of feelings of responsibility. In J.P. Tangey, and K.W. Fischer (Eds.), *Self Conscious emotions: the psychology of shame, guilt, embarrassment and pride*. NY: Guilford: 143-173.

Zavos, H. M., Rijsdijk, F.V., Gregory, A.M., Eley, T.C. (2010). Genetic influences on the cognitive biases associated with anxiety and depression symptoms in adolescents. *Journal of Affective Disorders, 124,* 45-53

Appendices

Appendix A: Information to parents

Appendix B: FRIENDS CBT training

Appendix C: Concentration PCT training

PERSON CENTRED LEARNING

TRAINING FOR FACILITATORS

St Helens PACE, Derbyshire Hill Rd, St Helens, Merseyside, WA92LH
Friday 24th October
Refreshments 9.15 a.m. – close 3.45 p.m.
Lunch provided

Cost per head (FREE)

Applying person centred principles to the mainstream classroom

Training will focus on using person centred practice to increase resiliency and well being in children aged 7-16 years

Aims:

Develop an awareness of person centred theory

Explore application of person centred theory to classroom settings

Overview person centred whole class intervention

Who is it aimed at?

- **Teachers**
- **Connexions workers**
- **Educational Psychologists**
- **School nurses**

St Helens Coordinator
John Pugh
Senior Educational Psychologist
Atlas House
Corporation Street
St Helens
WA9 1LD

John.pugh@sthelens.gov.uk

Appendix D: Concentration PCT manuals

Concentration Programme

Teacher's Manual

Concentration Programme

Appendix E: Teacher Self Scaling Of Session Integrity

											Total
CBT	6	8	9	7	8	9	7	6	8	7	**75**
CBT	7	9	6	9	9	8	7	6	9	8	**78**
CBT	6	6	9	9	8	7	9	8	8	9	**79**
PCT	7	6	9	9	8	7	6	6	9	8	**75**
PCT	7	8	9	8	8	7	6	9	9	8	**79**
PCT	8	7	6	8	9	6	8	9	7	8	**76**
PCT	6	7	8	9	8	9	7	6	8	9	**77**

Appendix F: Missing data analysis

Univariate Statistics for missing data

	N	Mean	Std. Deviation	Missing		No. of Extremes[a]	
				Count	Percent	Low	High
SCAST	274	38.4124	17.71926	0	.0	0	1
SCASPT	272	28.3860	17.19204	2	.7	0	5
CSIRprobsol	269	21.9033	4.97287	5	1.8	0	0
CSIRseeksoc	269	20.6989	5.40957	5	1.8	0	1
CSIRavoid	269	22.2193	4.17261	5	1.8	0	0
PCSIRprobsol	251	20.1753	5.25748	23	8.4	0	0
PCSIRseeksoc	250	19.9840	5.78182	24	8.8	0	1
PCSIRavoid	250	20.2640	5.07319	24	*8.8*	2	0
CEAQT	268	35.3134	5.39374	6	2.2	2	0
CEAQTP	249	34.1566	5.85954	25	9.1	3	1
BIM	268	16.2388	4.68671	6	2.2	2	0
BIMP	249	16.0884	4.44140	25	9.1	0	0
MT	268	17.2910	4.06008	6	2.2	8	0
MTP	249	16.4739	4.39395	25	9.1	8	0
MC	267	13.7004	4.02718	7	2.6	4	0
MCP	247	13.6599	4.03110	27	9.9	8	0
GENDER	273			1	.4		
Clinical	274			0	.0		
Responder	255			19	6.9		
CONDITION	274			0	.0		

a. Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

Comparison of EM and all values (means)

Summary of Estimated Means

	All Values	EM
SCAST	38.4124	38.4124
SCASPT	28.3860	28.4309
CSIRprobsol	21.9033	21.8751
CSIRseeksoc	20.6989	20.6762
CSIRavoid	22.2193	22.1875
PCSIRprobsol	20.1753	20.0958
PCSIRseeksoc	19.9840	19.9384
PCSIRavoid	20.2640	20.0603
CEAQT	35.3134	35.3003
CEAQTP	34.1566	33.9591
BIM	16.2388	16.2117
BIMP	16.0884	16.0689
MT	17.2910	17.2952
MTP	16.4739	16.3657
MC	13.7004	13.7102
MCP	13.6599	13.6154

Comparison of EM and all values (SD)

Summary of Estimated Standard Deviations

	All Values	EM
SCAST	17.71926	17.71926
SCASPT	17.19204	17.20255
CSIRprobsol	4.97287	4.97726
CSIRseeksoc	5.40957	5.41091
CSIRavoid	4.17261	4.18113
PCSIRprobsol	5.25748	5.25061
PCSIRseeksoc	5.78182	5.77532
PCSIRavoid	5.07319	5.10285
CEAQT	5.39374	5.39089
CEAQTP	5.85954	5.89573
BIM	4.68671	4.69430
BIMP	4.44140	4.48605
MT	4.06008	4.05693
MTP	4.39395	4.42508
MC	4.02718	4.02277
MCP	4.03110	4.05906

Appendix G: Normality data

Test statistics for the Kolmogov- Smirnov Test (K-S Test)

Scale	Variable	Kolmogrov-Smirnov (Pre)	Sig.	Kolmogrov-Smirnov (Post)	Sig.
Spence Anxiety Scale (SCAS, 1998)	Anxiety	.096	.000	.082	.001
The Child Coping Strategy Indicator – Revised – CCSI-R (Amirkhan and Auyeng, 2007)	Coping	.049	.20	.053	.10
The Children's Empathic Attitude Questionnaire – CEAQ (Funk, Fox, Chan, Curtiss, 2008)	Empathic Atitudes	.116	.00	.089	.00
Believing in Me, ClassMaps Survey (2007)	Sense of Mastery	.079	.001	*.070*	.006
My Classmates, ClassMaps Survey (2007)	Classroom relationships	.147	.00	.143	.00
My Teacher, ClassMaps Survey (2007)	Classroom relationships	.212	.00	.150	.00

Measures of variance, skew and kurtosis

CBT

Condition	Mean	Standard Deviation	Variance	Skew	Kurtosis
Anxiety pre	36.4	19.3	372.4	.825	.865
Anxiety post	28.2	15.4	238.4	.665	.237
Coping pre	63.15	11.45	131.51	.461	.126
Coping post	58.32	12.00	144.1	-.345	.418
Empathy pre	35.2	6.2	38.4	-.729	-.628
Empathy post	34.2	7.01	49.1	.392	2.285
My teacher pre	16.14	4.43	19.6	.036	-.281
My teacher post	15.41	5.2	27.09	-1.18	.817

PCT

Condition	Mean	Standard Deviation	Variance	Skew	Kurtosis
Anxiety pre	39.13	16.8	282.5	.825	.865
Anxiety post	33.7	15.9	288.4	.895	.868
Coping pre	65.14	*10.54*	131.5	.461	.126
Coping post	61.48	14.02	196.8	.460	.100
Empathy pre	34.7	4.7	22.7	-.187	-.682
Empathy post	33.9	5.42	29.4	-.355	-.52
My teacher pre	18.0	3.34	11.2	-1.85	3.63
My teacher post	16.7	3.76	14.18	-1.06	.743

SEAL

Condition	Mean	Standard Deviation	Variance	Skew	Kurtosis
Anxiety pre	36.6	16.9	288.1	.755	.230
Anxiety post	28.04	*14.54*	211.62	1.07	1.75
Coping pre	63.1	10.9	120.1	-.914	.931
Coping post	59.93	14.49	210.17	-.563	.530
Empathy pre	36.2	5.25	27.5	-.84	.46
Empathy post	34.3	5.53	30.6	-1.2	3.852
My teacher pre	17.6	4.21	17.724	-2.05	3.852
My teacher post	17.00	4.2	17.79	-.15	3.337

Appendix H: Teacher interview

To what degree, if any, did you feel that initial training helped you to accurately deliver the programme?

Which parts of the programme, if any, were more difficult to apply?

Which parts of the programme, if any, were less difficult to apply?

Which parts of the programme, if any, need to be changed?

Which parts of the programme, if any, did you consider more useful?

Which parts of the programme, if any, did you consider less useful?

Are there any children or groups of children who you consider to have benefited more from participation?

Are there any children or groups of children who you consider to have benefited less from participation?

Would you use the programme again?

Appendix I: Focus group questions

What, if anything, did you like about the work?

What, if anything, did you not like about the work?

What, if anything, did you find useful?

What, if anything, did you find less useful?

What, if anything, would you change?

Would you like to continue with this kind of work?

Appendix J: Parental consent for child focus groups