



**The University of  
Nottingham**

**School of Psychology**

**An investigation into the impact of an indicated CBT-  
based intervention on anxiety in secondary school  
students**

by

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Thesis submitted to the University of Nottingham for the  
degree of Doctor of Applied Educational Psychology

May 2014

Word count: 39,977

# Abstract

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This study presents a mixed methods investigation into the efficacy of an indicated CBT-based intervention for addressing anxiety in a sample of secondary school students within the UK.

Phase One of the study employs a quasi-experimental evaluation of a CBT-based intervention. 18 participants (7 male, 11 female, mean age: 12 years 6 months) were allocated to intervention (n=8) or wait-list comparison (n=10) conditions using a matched pairs process. The intervention comprised six sessions of a CBT-based programme, delivered by teaching assistants trained in the principles of CBT; wait-list participants attended their usual lessons. Phase One investigated the effects of intervention participation upon students' self-reported anxiety and parent-reported perceptions of student anxiety, using the respective versions of the Spence Children's Anxiety Scale (SCAS and SCAS-P). Results demonstrated that there were no statistically significant effects upon student-reported anxiety or parent-reported perceptions of student anxiety. Parents of participants within the wait-list condition reported increased student anxiety *during* the intervention phase, albeit this trend did not reach statistical significance.

Phase Two represents a qualitative exploration of participants' perceptions of their post-intervention anxiety regulation abilities and their insight into the programme mechanisms. This phase incorporated Focus Group and Nominal Group Technique approaches, with data reviewed through Thematic Analysis. Findings suggested that participants perceived intervention attendance to have developed their knowledge and understanding of strategies which may either a) actively address the causes of their anxiety or b) enable them to manage the physiological, emotional, cognitive and behavioural implications of anxiety. Participants indicated that intervention participation had increased their understanding of the importance of seeking social support for managing anxieties.

Key methodological reflections for this two-phase design are discussed. Findings are compared to the wider literature regarding anxiety and CBT approaches in children and young people. The implications of these findings for future research and the practice of Educational Psychologists are considered.

# Acknowledgements

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I would like to express my utmost thanks and gratitude to the following people for their support during both the current research and throughout my Doctoral training as a whole;

- To the tutor team at the University of Nottingham, and in particular Anthea Gulliford for her continued supervision, support and guidance.
- To my fellow Trainee Educational Psychologists; the fantastic 'Team TEP' for their friendship, peer support and for making the three years of Doctoral training both fun and memorable.
- To my colleagues at the Educational Psychology Service where I completed my training placement, with special mention reserved for Martin Osborne and Clare Bentall as my placement supervisors.
- To the staff and students at the participating school, for their enthusiasm and participation.
- To my family and friends for their unerring support and patience at every step of the journey, in particular my parents and my sister, with special mention to my father as my 'proof reader in chief'.
- To my girlfriend, Emma; her endless understanding, patience, and encouragement have been invaluable.

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# Introduction

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## **1. Introduction**

### **1.1 Introduction**

The current study investigates the effectiveness of an indicated (i.e. small-group, preventative) Cognitive Behavioural Therapy (CBT) intervention for addressing anxiety in secondary school students.

“CBT is based on the underlying (psychological) assumption that affect and behaviour are largely a product of cognitions and, as such, that cognitive and behavioural interventions can bring about changes in thinking, feeling and behaviour” (Stallard, 2005; 1). CBT interventions therefore consider the relationship between thoughts, feelings and behaviour (Shucksmith et al, 2007), incorporating approaches from Cognitive and Behaviourist Psychology in light of the “complex interaction of cognitive and environmental factors in the cause and maintenance of children’s phobias and anxiety disorders” (King, Heyne and Ollendick, 2005; 243).

A range of international research studies have provided empirical support for the use of CBT approaches with young people experiencing emotional well-being and mental health needs, with increasing evidence for the delivery of CBT-based approaches on individualised, small-group and whole class bases. Previous doctoral research has also explored the efficacy of CBT interventions (Clarke, 2011; Paul, 2011; Green, 2013). The wider literature concerning the theoretical underpinnings of this study will be explored in Chapter 2.

### **1.2 Personal and professional interest in this area of research**

This study is carried out by a Trainee Educational Psychologist (TEP) currently on a two year Doctoral Training placement with a Local Authority Educational Psychology Service (LA EPS), and fulfils the integral research

component of the Doctorate in Applied Educational Psychology (DAppEdPsy) at the University of Nottingham.

The researcher developed an interest in anxiety intervention support and CBT-based approaches via both their previous experience as an Assistant Psychologist and taught input at the University of Nottingham, and through extensive professional development training in the use of CBT approaches, provided by the EPS. The researcher utilises CBT-based approaches during professional practice as a TEP for supporting young people experiencing a range of emotional, well-being and mental health needs. A review of the literature underpinning the use of CBT highlighted the need for further research into the use of indicated interventions, which, combined with the researcher's professional experience of CBT-based interventions targeted at supporting young people with higher-level anxiety, led to the researcher seeking to investigate whether small-group CBT-based interventions can provide positive outcomes for young people experiencing initial anxiety needs.

### **1.3 The interests of the Local Authority**

The Educational Psychology Service (EPS) is strongly committed to increasing the use of CBT-based principles within EP casework, wherever appropriate. The Principal Educational Psychologist and Senior Educational Psychologists were supportive of this research into the use of such approaches within educational settings.

Within the broader Local Authority (LA), there is an emphasis on promoting early intervention and preventative practice, in the best interests of young people, attuned to the developments in early intervention policy and practices (Warwickshire County Council, 2013). This study focuses on whether indicated CBT-based interventions can produce positive outcomes for young people experiencing anxiety.

## **1.4 The unique contribution of this study**

The literature review presented below examines how this research is able to make a contribution to the existing evidence base for the use of CBT-based interventions with anxiety through a combination of factors, including:

- (i) Undertaking an evaluation of the use of an indicated CBT intervention with UK school students, with the aim of obtaining further information about the efficacy of this approach with a UK-based sample.
- (ii) The implementation of this approach with secondary age students specifically (i.e. aged 11 years and older) to further the evidence base for indicated CBT support with young people of this age.
- (iii) The evaluation of the efficacy of indicated CBT support when implemented by school teaching staff trained in the use of CBT-based principles.

## **1.5 Overview**

This thesis is presented across five chapters. The following sections provide a brief overview of each chapter.

### Chapter two: Literature Review

This study is configured under the considerations and processes of evidence-based practice. As this research is focused upon the utilisation of CBT support for intervening with anxiety, the literature review provides a summary of pertinent national and local factors underlining the need for evidence-based intervention support for young people experiencing anxieties and broader mental health and emotional well-being needs. Definitions of anxiety are considered and CBT is suggested as a potentially efficacious means of intervention. The theoretical underpinnings for CBT are explored and a review of literature into the application of CBT with young people experiencing anxiety is presented, including a systematic review of the evidence base. The chapter concludes with an explanation of the unique contributions made by this study to the existing literature and the research questions for the study are outlined.

### Chapter three: Methodology

This chapter aims to describe the research methodology used within the current study. The chapter begins with considerations of epistemology and research paradigms, and the implications of these factors for methodological decision making are discussed. An account of the current research design is provided, and the rationale for the choice of design.

As this study adopts a mixed-methods approach, Phases One and Two of the study are considered in turn. Phase One employs a quantitative, quasi-experimental evaluation of a CBT-based intervention programme and an account of the quantitative means of data collection is provided. Phase Two constitutes a constructivist exploration of student perceptions of intervention participation and the subsequent implications of participation upon their anxiety regulation abilities. Similarly an account is provided of the qualitative approaches employed. Ethical considerations within the current research are also discussed.

### Chapter four: Results

This chapter details the quantitative and qualitative analyses undertaken for Phases One and Two respectively. A description of the statistical analyses undertaken for the fixed design, Phase One is provided, followed by a description of the qualitative analyses employed for the exploratory Phase Two.

### Chapter five: Discussion

The concluding chapter provides an interpretation of the data obtained within the current study. The purpose of this chapter is to answer the initial research questions presented in Chapter two through linking the findings of the current study to the prior research outlined within the literature review.

This chapter also provides a critique of the research methodology employed and reflects upon the suitability of this methodology for addressing the initial research questions. The implications of this study's findings for future research and professional practice are also considered, before the final conclusions are presented.

# Literature Review

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## 2. Literature Review

### 2.1 Introduction

This chapter provides a review of salient literature relevant to the current research study.

The impetus for the current research emerged from conversations with various stakeholders, including the Principal EP and several Special Educational Needs Co-ordinators (SENCOs) from local schools who indicated that young people's anxieties were of particular concern within the LA. They reported that young people's anxieties were notably higher in secondary education following transition from primary school, and/or prior to key stage four examinations. An opportunity was identified for preventative interventions in school-based contexts; support which may be implemented prior to the need for a referral to specialist mental health services regarding higher-level anxiety.

A synopsis of key information derived from both national policies and legislation *and* the local context within which the study is conducted is provided. This contextual information emphasises the need for evidence-based practice and effective intervention support when addressing those anxieties experienced by young people.

Key frameworks are then introduced, detailing the theoretical foundation for the Cognitive Behavioural Therapy (CBT) intervention approach used within the study. An overview of the empirical evidence for the use of CBT with school-based populations is provided, with reference to the use of CBT in both preventative and reactive manners. This overview will introduce potential areas for further research within the existing evidence base.

A systematic review of the research literature relating to the implementation of CBT support on an indicated basis (i.e. of a preventative nature delivered

via a small-group format) is then provided, and the search strategy, inclusion criteria, and appraisal methods are presented. The conclusions from this review highlight the need for further research into the efficacy of indicated CBT support with UK-based school students. The need for this investigation is explained and the importance of supporting children and young people experiencing mental health needs, specifically anxiety needs within schools is considered. In particular, it is argued that further investigation is required regarding the efficacy of CBT support for producing positive outcomes for young people experiencing anxieties during early adolescence. These conclusions form the basis for the research questions underpinning the current study; these questions are presented in section 2.11.

## **2.2 Defining anxiety**

Anxiety can be defined as "an emotion or fright indexed by physiological arousal or subjective feelings of agitation" (Bandura, 1997; 138).

Anxiety in itself should not be construed as a solely unhealthy, dysfunctional phenomenon. Indeed it has been argued that anxiety serves a protective purpose, designed to aid an individual's adaptation to and avoidance of environmental risk factors, thereby optimising said individual's survival (Bateson, Brilot and Nettle, 2011), as part of a 'fight or flight' evolutionary response (Zinbarg, Craske and Barlow, 2006).

The distinction between anxiety as a) an evolutionary function, or b) dysfunctional behaviours should only be considered at the point where an individual's anxiety no longer represents an appropriate adaptive response to the circumstances within which the individual finds themselves. At this point, a person's anxieties may become: "an irrational fear of a situation or stimulus that is in excess of what would be considered reasonable and age appropriate" (McLoone, Hudson and Rapee, 2006; 219), thereby impeding their quality of life and daily routines. In this sense, anxiety has the potential to act as a barrier to a range of social and academic experiences for children and young people. The implications of anxiety for young people are

discussed further in section 2.2.4; 'The potential consequences of anxiety in young people'.

For the purposes of this study, it is also necessary to distinguish between state and trait anxiety, as both are referred to within existing literature. State anxiety is defined as "a transitory emotion characterized by physiological arousal and consciously perceived feelings of apprehension, dread and tension" (Endler and Kocovski, 1999; 232), whereas trait anxiety represents a tendency or predisposition to respond in an anxious manner (ibid). This study focuses upon state anxiety which may be considered to be a natural phenomenon for young people, who may experience occasional fears or worries during childhood and adolescence (Barrett, 2000), including: concerns regarding family relationships, separation from carers, educational performance and self-consciousness (King and Ollendick, 1989), for example. These worries may, at times, represent early anxiety difficulties, but should not be confused with anxiety disorders.

It is only when the severity and persistence of anxieties intensify to the extent that they impair daily functioning that an anxiety disorder such as panic disorder or social phobia may be recognised (American Psychological Association, 2013). Appendix 1 provides a summary of recognised anxiety disorders for the reader, for illustrative purposes.

### **2.2.1 Anxiety prevalence rates amongst children and young people**

Estimates suggest that a minimum of 2.6% and perhaps as many as 41.2% of British children and young people experience anxiety and/or anxiety disorders (Cartwright-Hatton, McNicol and Doubleday, 2006, Meltzer et al., 2003), whilst international studies indicate that between 4% and 25% of children and young people experience distressing levels of anxiety (Anderson, Williams, McGee and Silva, 1987; Chavira, Stein, Bailey, & Stein, 2004; Costello, Mustillo, Keeler, & Angold, 2004; Kashani & Orvaschel, 1990, Neil and Christensen, 2009). Other estimates suggest that 8-12% of children and young people suffer from categorically defined, recognised anxiety disorders (Bernstein, Borchardt and Perwein, 1996), whilst previous



indications suggest up to 40% of British children and young people experiencing mental-health needs are not receiving specialist support (DoH, 2004).

The World Health Organisation (WHO, 2004) acknowledged the severity of unaddressed childhood anxiety, stating that anxiety disorders represent the most common form of psychiatric disorders to develop during childhood, with many individuals facing these needs in adolescence and beyond (Majcher & Pollack, 1996).

### **2.2.2 Symptomatology**

Whilst the experience of anxiety difficulties may be largely individualised, these experiences can share common features. It has been reported that young people may experience various symptoms including depression, lack of concentration, low self-confidence, impaired attainments and poor social relationships (Strauss et al., 1987, Ialongo et al., 1996). Symptoms may be physiological (e.g. difficulty breathing, increased perspiration) and/or psychological (e.g. paranoia, concerns regarding coping abilities). Possible symptoms are further outlined in appendix 2.

### **2.2.3 The development of anxiety**

Consideration of the factors underpinning the development of anxiety needs is therefore warranted. As Rapee (2012) states, a distinguishing factor in recognising the development of anxiety difficulties (or subsequent anxiety disorders) is the development of 'avoidance' behaviours by an individual, to an extent which may be interpreted as disproportionate to the threat or expected threat posed by certain stimuli/circumstances, as outlined in the previous section. This may entail avoidance of certain situations, places, stimuli or individuals but may also include behaviours including hesitancy, uncertainty or routinised/ritualistic actions. Diagnoses of anxiety disorders primarily consider the triggers for avoidance behaviours, and the prevalence and severity of such behaviours (ibid).

Additionally, literature in the field suggests that a number of potential risk factors may contribute to the development of anxieties in young people. Whilst a comprehensive account of the range of factors underpinning anxiety in children and young people is beyond the scope of this literature review, a brief overview of a number of key risk factors will now be provided in the following section.

### **2.2.3.1      *Potential risk factors in the development of heightened anxieties in children and young people***

#### **2.2.3.1.1      Life events**

To date, research into the role of life events in the onset of anxieties has focused primarily on adulthood anxieties over those of children and young people. However, some research (Allen et al., 2008) provides tentative indications that young people experiencing anxiety report a greater number of negative life events and greater perceived impact of these events than peers without recognised anxieties/anxiety disorders. That said, greater clarity is required regarding whether life events may play a causal role in the onset of anxieties, with further research needed in this area. Bullying represents one such life event which may be linked to anxieties, although clarity around directions of causality is again limited. Grills and Ollendick (2002) presented findings that suggest that anxious young people reported higher levels of bullying than non-anxious peers, yet it is unclear whether anxious adolescents draw negative attention/teasing from peers due to anxious behaviours or whether teasing prompts initial/further anxieties.

Rapee (2012) cites the importance of 'dependent' life events in the onset of anxieties. Dependent life events involve circumstances which may be the result of the young person's actions (e.g. a poor test result following inadequate revision). Rapee argues that dependent life events may prompt feelings of anxiety, which may in turn lead to impaired functioning, and/or performance and further subsequent negative experiences in future. These experiences may then further exacerbate worries as part of an ongoing

negative cycle which may require punctuation through appropriate intervention.

#### **2.2.3.1.2 Cognitive biases and misinterpretations**

Dysfunctional patterns of thinking, otherwise known as cognitive biases or 'thinking errors' (Stallard, 2005) may prompt the onset of anxieties and maintain these anxieties over time. Cognitive biases relate to the tendency to interpret events/situations in a manner which may be distorted or unhelpful (Fuggle, Dunsmuir and Curry, 2013) and might include:

- Fixed, categorical beliefs about others;
- Catastrophising;
- Over generalisation;
- Mind reading and making assumptions about the actions of others;
- Attributing over-responsibility to oneself;
- Perfectionism and setting oneself largely unattainable standards (ibid; 176).

Evidence suggests that anxiety threat beliefs are increased amongst children and young people experiencing anxiety, compared to those experiencing other forms of psychopathology but that these will decrease with appropriate intervention (Schniering and Lyneham, 2007).

#### **2.2.3.1.3 Parent and family factors**

Literature indicates that children and young people experiencing anxiety are statistically more likely than their peers to have a parent with an anxiety disorder or history of anxiety needs (Rapee et al., 2009; Last et al., 1987; 1991; Lieb et al. 2000). Intuitively, modelling and learning influences provided by parents experiencing anxiety needs may lead to their children experiencing anxieties of their own, as suggested by various authors (Field, 2006; Menzies and Clarke, 1995; Mineka and Zinbarg, 2006), with it also being argued that the parenting styles of parents with anxious children/adolescents may be overly protective or negative (McLoed et al,

2007). Potential causal relationships between parenting style/influence and anxiety needs are however difficult to determine and scientific investigations of the role parenting and/or modelling may play in adolescent anxiety development are limited in number, given the range of ethical complications associated with such research. Instead, literature in this area consists primarily of theoretical accounts (Hudson and Rapee, 2004; Rubin et al., 2009) which suggest that parent-child relationships may produce negative cycles which prompt and maintain anxiety. For example, inhibited behaviours in children and young people may prompt overprotection from parents, with subsequent protective parenting potentially leading to further anxiety and inhibited behaviour in children and young people in future.

#### **2.2.3.1.4 Genetic considerations**

Some research has been conducted into the role of genetics in relation to the onset of anxieties, with twin studies (Gregory and Eley, 2007) indicating that up to 40% of the variance in anxiety symptomatology and possible disorders may be attributable to heritability. Research in this area is again limited however, with the majority focusing on adult-only samples. As such, further research is required into the role of genetics in the development of anxiety amongst children and young people.

The following section will now consider the possible consequences and implications of anxiety needs in children and young people.

#### **2.2.4 The potential consequences of anxiety in young people**

The importance of appropriate anxiety intervention is underlined by the potential implications and consequences of unaddressed anxieties for children and young people, some of which will be outlined in this section.

Firstly, consideration must be given to diagnostic criteria for anxiety disorders (outlined in appendix 1); amongst other factors, anxiety disorders are considered on the basis of duration, persistence and severity of anxiety symptomatology. The onus is therefore placed upon professionals to identify appropriate intervention to prevent young people's needs escalating to the

point whereby anxiety disorders are recognised and specialist, individualised support is required; a concept illustrated by the Warwickshire Wedge; Figure 2.1.

Indeed, anxiety disorders represent one of the more stable forms of psychopathology (Rapee, 2009; 2012) with research indicating that children experiencing anxieties up to late childhood are at increased risk of experiencing anxiety disorders in adolescence, with adolescents also at increased risk of experiencing anxiety disorders in adulthood. Pine et al (1998) conducted a longitudinal study over a period of 9 years with a sample of 776 children and young people experiencing anxiety and anxiety disorders. Their findings illustrated that adolescent anxiety or depression disorders were linked to a 3-fold increased risk of anxiety disorders in adulthood. Another study (Bittner et al., 2007) provided evidence indicative of the potential for homotypic continuity of specific anxiety disorders, thereby contributing to a growing number of studies which corroborate the possibility of children and young people's anxieties continuing into later life (Bittner et al. 2007, Costello et al. 2003, Keller et al. 1992, Last et al. 1996). Gregory et al (2007) used longitudinal data from a sample of 1,037 participations with diagnoses of psychiatric disorders. Of those adults with an anxiety disorder, approximately half had received a diagnosis of a psychiatric disorder (one-third with an anxiety disorder) before the age of 15 years, whilst 64% of adults with an anxiety disorder had been diagnosed as such before the age of 18 years.

Secondly, it has been noted that an increase in anxiety may impact upon a child's willingness to attend school (Miller, 2008; 218), with some risk of school refusal. This indicates the need for evidence-based, preventative support for young people's anxiety.

Whilst it should be noted that school refusal is not an anxiety disorder in its own right, and non-attendance may be initiated by other factors aside from or in addition to anxiety (Rapee, 2012), anxiety *can* be a common element with regard to attendance-related issues, with possible formulations including:

- Unresolved separation anxiety needs, whereby the child does not want to leave their parent(s) (Johnson et al., 1941; American Psychiatric Association, 2013);
- Social anxieties, whereby social interactions and fears of rejection or isolation are prominent (American Psychiatric Association, 2013);
- School-focused anxieties; a form of 'specific phobia' (ibid) whereby physical aspects of the school environment and routine prompt negative emotions (e.g. apprehension using school toilets, strictness of teachers).

A distinction must therefore be made between anxiety-based school refusal and truancy (Wimmer, 2008), with criteria for anxiety-based school refusal including:

- Severe difficulty in attending school, with the possibility of prolonged absence;
- Staying at home with the knowledge of parents;
- Severe emotional upset including excessive fearfulness of the prospect of going to school;
- Absence of significant anti-social behaviours (ibid).

Anxiety-related school refusal does not therefore typically involve those anti-social behaviours often associated with truancy, and absences are not concealed from parents/adults. Children and young people primarily demonstrate notable distress towards attending school.

Research has been undertaken in this area; Van Ameringen et al. (2003) conducted a study regarding school phobia with 201 participants, all of whom met DSM-IV criteria for at least one anxiety disorder. Approximately 49% (n=98) reported leaving school early, with 24% attributing this to anxiety needs. They concluded that participants leaving school early were significantly more likely to experience long-term negative consequences, e.g. a diagnosis of social phobia in later life, compared to adolescents who completed their education.

Whilst these findings may be limited by their retrospective nature and the use of a clinic-based setting, it was concluded that investigation into effective early intervention with anxiety was required to reduce the possibility of other students developing similar needs. Other authors (Egger, Costello and Angold, 2003) suggested that the risk of psychiatric disorders were three times greater for students with anxiety-related school refusal compared to those without attendance problems.

Wood (2006) investigated the relationship between anxiety intervention support, reductions in children's anxiety over time, and levels of school performance and social functioning in 40 children and young people (aged 6-13 years) with high anxiety. Participants accessed a Cognitive Behavioural Therapy (CBT) intervention (see 2.5) with measures taken pre, during and post intervention. Children, parents and independent observers evaluated participants' anxieties and these observations were compared with parent-reported school performance and self-reported and parent-reported social functioning evaluations. Results suggested that reductions in anxiety correlated with improved social functioning and school attainment during the intervention, suggesting that addressing anxiety needs is integral to ensuring social and academic success.

Whilst Wood's study included highly anxious participants, intuitively, targeting anxiety needs at an earlier stage may also be beneficial to the well-being of young people. The need to address school attendance concerns is indeed reflected in current Government advice (DfE, 2013; 6) which states that schools and local authorities are required to implement support strategies which:

- Promote good attendance and reduce absence, including persistent absence;
- Ensure every pupil has access to full-time education; and,
- Act early to address patterns of absence.

CBT may be an example of such intervention support. King et al., (1998) demonstrated significant attendance improvements for students at risk of

school refusal following CBT support, compared to wait-list control students in an RCT design. These participants also reported feeling increasingly able to cope with anxiety-provoking situations (e.g. peer altercations). Wood (2006) and King et al. (1998) therefore provide two examples of the positive impact of CBT on children's mental health. Specifically, King et al., provide evidence that effective intervention with early anxiety needs may be one means of promoting good attendance and reducing the risk of persistence absences.

## **2.3 Mental Health and anxiety support for Children and Young People within the UK**

The preceding sections covered definitions of anxiety, prevalence rates and symptomatology, in order to operationalise the area of well-being focused upon within this research. The following sections outline national and local factors underlining the importance of evidence-based intervention support for children and young people experiencing mental health needs.

### **2.3.1 The National Context**

The mental health and well-being of students is an ever growing political agenda, as reflected in recent policy developments.

The 2008 Labour Government and the former Department for Children, Schools and Families initiated the Targeted Mental Health in Schools (TaMHS, DCSF, 2008) project. This three-year project prioritised early intervention for young people experiencing mental health difficulties, including anxiety. Key aims included:

- **Strategic integration** – developing multidisciplinary working to deliver effective early intervention/prevention for mental health needs in young people, and;
- **Evidence-informed practice** – improving the evidence base for mental health support and establishing efficacious interventions for supporting 5-15 year-olds.



TaMHS prioritised the strategic integration of all services responsible for the provision of child and adolescent mental health services (including schools), in order to deliver mental health services that were considered to be responsive, flexible, and focused on early intervention and prevention. Utilising intervention support that was underpinned by empirical evidence was another key factor of the TaMHS initiative.

This initiative was evaluated by two studies across 25 Local Authority (LA) pathfinders: a longitudinal study (duration: 2008-2011) and a Randomised Control Trial (RCT). The longitudinal study included 19,695 students across 391 schools, whilst the RCT included 30,796 students across 559 schools, incorporating random allocation of LAs to experimental conditions (offering differing levels of support designed to enhance TaMHS implementation). Higher-resourced LAs were compared with lesser-resourced LAs, where resources included the provision of implementation guidance booklets for professionals; multi-agency implementation/troubleshooting teams; and evidence-based self-help booklets for students.

Results from the longitudinal study indicated:

- Reductions in emotional and behavioural difficulties, reported by primary pupils *and* teachers;
- Reduced emotional difficulties, reported by secondary-age students
- No reduction in behavioural difficulties; reported by secondary-age students;
- No reduction in emotional difficulties and slight increases in behavioural needs, reported by secondary teachers.

The RCT findings suggested TaMHS provision had a positive impact for young people with behavioural difficulties in primary schools compared to controls, but no evidence of positive outcomes was apparent for secondary-age students or students with emotional (e.g. anxiety) needs. The scale of the overall evaluation made 'quality assurance' of intervention implementation difficult, whilst the extent to which RCT LAs adhered to their experimental/control conditions (avoiding implementing additional

approaches/resources) is questionable. In summary, whilst the TaMHS project was well intentioned, the outcomes of this project were mixed and the need remained for investigation into 'what works' for addressing emotional and behavioural needs in UK schools.

However, despite these efforts to raise standards of support for young people's mental health and well-being in the UK, consecutive UNICEF reports (United Nations' Children's Fund, 2007; Adamson, 2010) regarding the mental well-being of children and young people in 'developed' nations have ranked the UK in the bottom third of 21 developed nations, highlighting a continued need to further the range of efficacious interventions available to young people experiencing mental health needs within the UK.

The 'Improving Access to Psychological Therapies' project (IAPT, Department of Health, 2006) is one current approach, designed to address this statistic and increase positive mental health outcomes within the UK. IAPT was initially founded by the then-Labour Government and promoted access to therapeutic support for adults experiencing anxiety and/or depression. In 2011, the Department for Health (under the current Coalition Government) broadened the scope of the project to provide support for young people aged under 18 (CYP IAPT, Department of Health, 2011). The continuation and expansion of this project by the current Government underlines the political importance of improving the emotional health and mental well-being of young people. The evaluation of the Children and Young People's IAPT is ongoing (Anna Freud Centre, 2014).

With the broadening scope of the IAPT project came the statement that "Mental Health is everyone's business" (Department of Health, 2011; 5); thereby extending the responsibility for facilitating positive outcomes to include schools and other community settings/services relevant to young people. This concept is discussed in section 2.4. Sections 2.3.2-2.3.2.2 will now consider the local context within which the current study was based.

### **2.3.2 The Local Context**

It is important to consider the context within which this research is embedded; the following sections will discuss pertinent issues within the Local Authority concerned.

#### **2.3.2.2        *The role of the Educational Psychology Service***

The author is currently undertaking a professional training placement within an Educational Psychology Service (EPS) based in the West Midlands, UK.

EPSs work primarily towards “the promotion of learning, attainment and the healthy emotional development of children and young people aged 0 to 19, through the application of psychology, by working with early years settings, schools (and other education providers), children and their families, other local authority officers, practitioners and other agencies” (Department for Children, Schools and Families (now Department for Education), 2008 cited in Frederickson, Miller and Cline, 2008; 3). Educational Psychologists (EPs) are therefore well placed to promote positive outcomes for the mental health and well-being of young people via both direct work with the young people and indirect work with a range of adults around the young person (e.g. parents, teaching staff).

The other major source of local support for children and adolescents experiencing mental health needs is provided by the local Child and Adolescent Mental Health Service (Coventry and Warwickshire CAMHS, 2013). In contrast to the school-based model of service delivery provided by the EPS, CAMHS services are typically provided on an individualised basis within a clinic-based setting. CAMHS intervention is usually reactive (versus preventative); working with young people with the most severe needs.

The local need for evidence-based anxiety interventions was reinforced by the LA’s commitment to Early Intervention with a range of Special Educational and Additional Needs, including anxiety concerns. This commitment is evidenced by the LA’s SEN Market Provision statement (Warwickshire County Council, 2013):

*“To support people, especially the most vulnerable and disadvantaged, to access throughout their lives every opportunity to enjoy, achieve and live independently”* (Warwickshire County Council, 2013; 4).

To achieve this, the LA made a commitment to commissioning evidence-based universal, targeted and specialist services to areas of identified need, including young people’s mental health and emotional well-being. As illustrated in Figure 2.1; the LA strives to invest in early intervention services, with a view to reduce the need for specialist/individualised support. This local agenda was therefore influential in the researcher and the participating school seeking to investigate the efficacy of preventative support for anxiety.

## **2.4 A Community Psychology Framework**

The current study is underpinned by a Community Psychology theoretical framework which advocates the implementation of intervention support within community/non-clinical settings; where a child’s anxieties may occur on a regular basis. This framework also advocates the active involvement of those community individuals responsible for supporting the long-term process of positive change (Sanborne, 2002).

The emphasis is upon using a multi-agency process to identify needs, with the full range of professionals/adults who support any given young person considered to be responsible for identifying possible difficulties as early as possible, so that appropriate support may be sought (Rait et al., 2010). This framework therefore proposes an integral role for schools in addressing young people’s anxiety disorders, prompting the need for continued research into the efficacy of school-based intervention support, as per the current study.

Schools have been recognised as key therapeutic contexts (DfES, 2001), given their position as a key microsystem for the child; a concept derived from Ecological Systems Theory (Bronfenbrenner, 1990, Figure 2.2). Microsystems are those environmental contexts within which the young person may be situated and which may directly influence them. Within the

school microsystem, young people may face various opportunities and challenges and given the regular contact young people have with their schools, such settings may be ideally placed to provide further support: “School-based interventions are thus uniquely poised to enhance generalisability by encouraging practice and fostering growth in the very situations that reflect difficulty” (Mychailyszyn et al., 2011; 225).

Linked to this, Burns (2011) suggests the importance of ‘prevention science’ within school psychology, i.e. the need for psychologists to work alongside a range of stakeholders to identify possible risk and protective factors for children or young people of concern, in order to minimise/prevent students’ needs (emotional or otherwise) from escalating (Burns, 2011; 134). Prevention science has been shown to be an effective approach (Botvin, 2004; Stith et al., 2006) and the use of ecological perspectives to child development and theoretical models such as ecological systems theory (Figure 2.2) may guide EPs’ preventative practice regarding young people’s anxiety.

Within this preventative framework, EPs have the opportunity to make a valuable contribution by intervening early with individual students’ anxiety through the utilisation of CBT (discussed in section 2.5), whilst simultaneously working to affect positive systemic change within those school systems which may also contribute to the difficulties/anxieties experienced by students (Burns, 2011).

Furthermore, the need for professionals to work in a multidisciplinary manner in order to support young people’s mental health and well-being in such settings has been recognised (Department of Health, 2004; Aggett, Boyd and Fletcher, 2006), as illustrated in the four-tier model of CAMHS service delivery (Figure 2.3). These values will be apparent within the intervention approach used in this study; outlined in chapter 3, whilst research into the efficacy of school-based CBT for children and young people experiencing anxiety will be explored in sections 2.5.3 and 2.7.

# PEOPLE GROUP delivering within the **WEDGE**

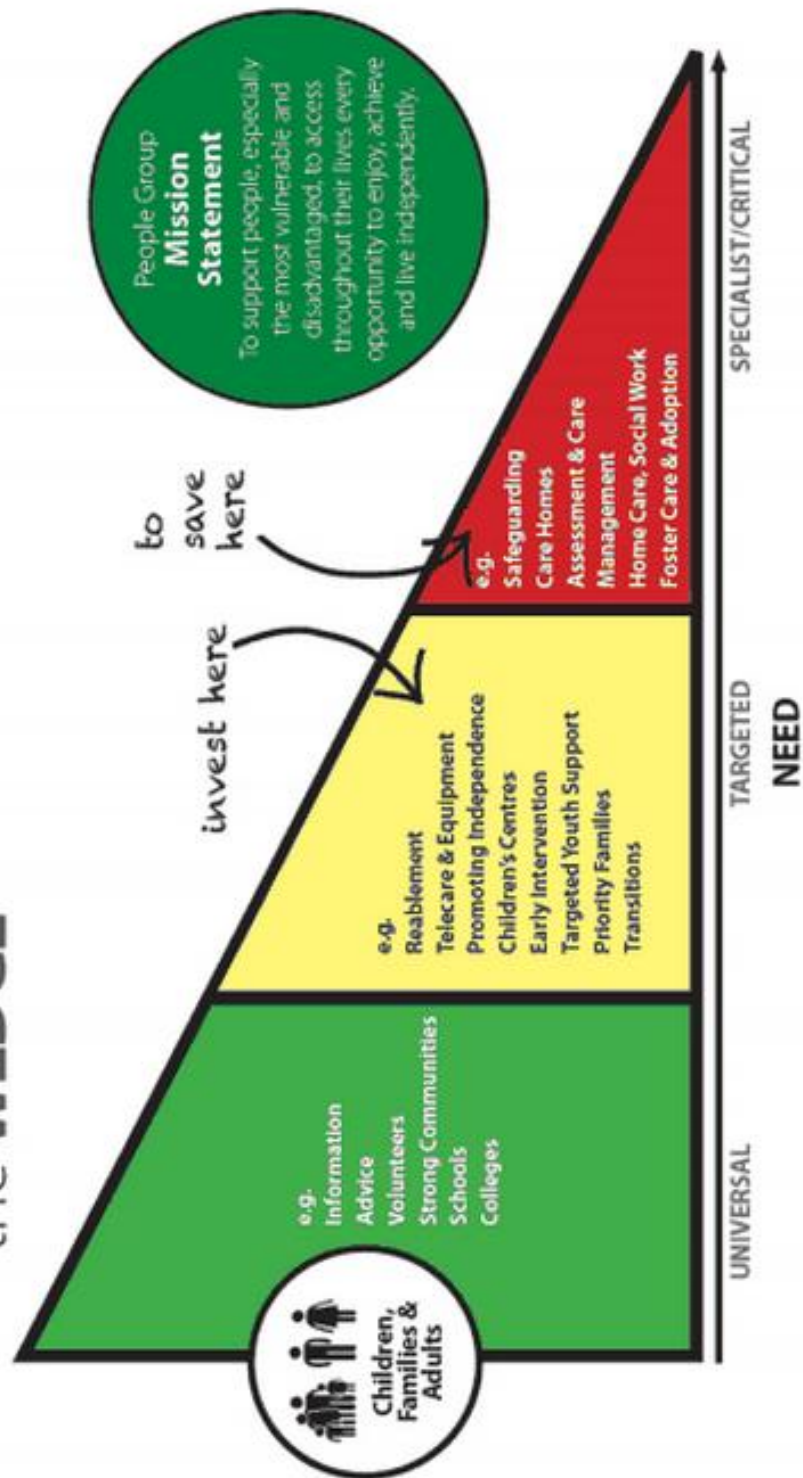
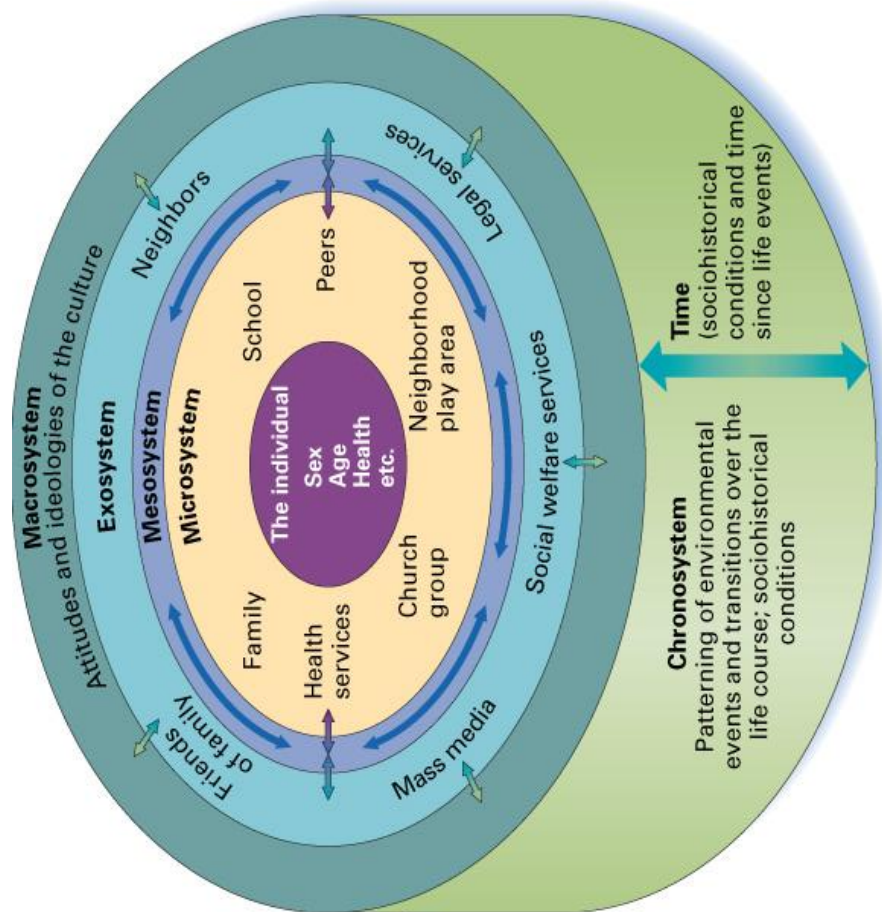
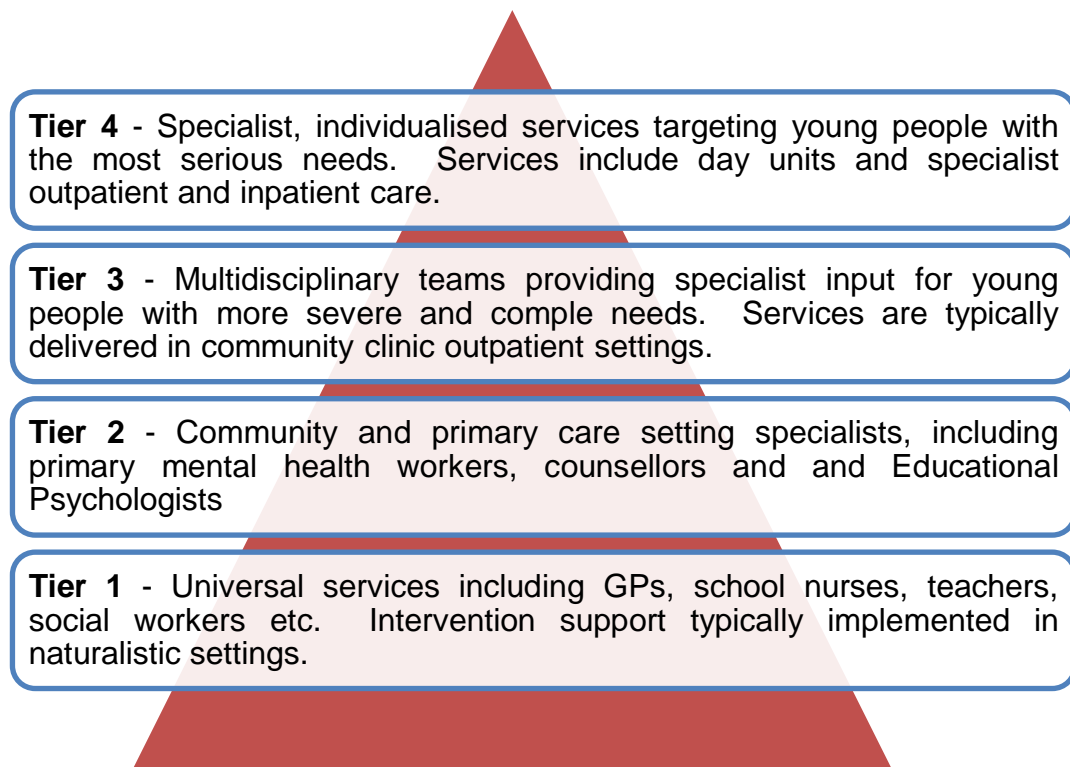


Figure 2.1 - Local Authority Early Intervention Diagram



**Figure 2.2 - Bronfenbrenner's Ecological Systems Model (Bronfenbrenner, 1990)**



**Figure 2.3 - Four Tier Model of CAMHS service delivery (Every Child Matters, 2010)**

## **2.5 Cognitive Behavioural Therapy**

The following section introduces CBT, the theoretical basis for the intervention used in the current study. An overview of existing research supporting the use of CBT, both reactively and preventatively, is also provided.

### **2.5.1 Level of intervention**

Interventions targeted at addressing mental health needs are typically either reactive (i.e. providing support to those with the greatest need) or preventative in nature. Mental Health Interventions, including CBT, may be delivered on 'universal' (e.g. whole-class), 'indicated' (i.e. small group support focusing on lower-level needs/early intervention) 'targeted' (i.e. small group support focusing on higher-level needs) or individual bases (focusing on heightened needs as per a CAMHS model of service delivery) (Neil and Christensen, 2009; 208, Kavanagh et al., 2009). The value of this model, as



with Figure 2.1, is that it emphasises the importance of early intervention with mental health concerns, with a view to preventing the need for individualised intervention for young people with higher-level needs.

### **2.5.2 Cognitive Behavioural Therapy: A theoretical model for supporting children and young people experiencing anxiety**

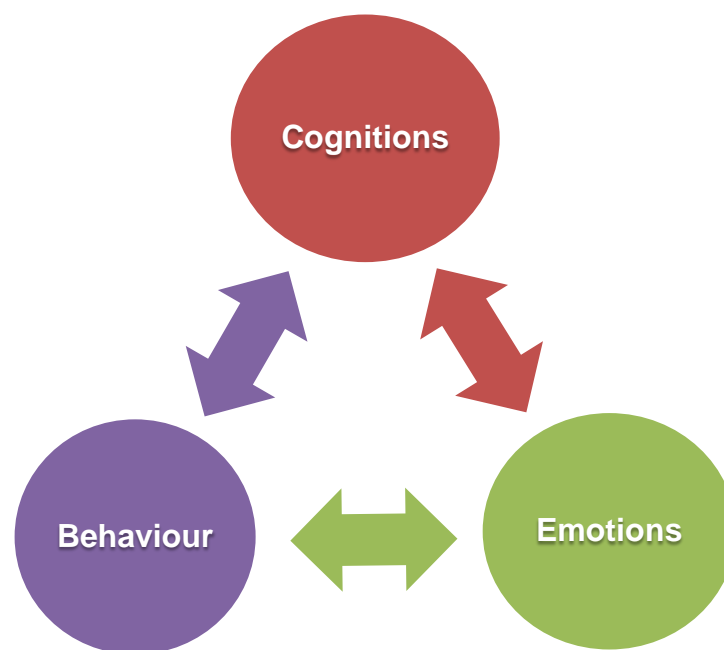
Cognitive Behavioural Therapy (CBT) is considered to be a promising intervention for childhood and adolescent anxiety (Cartwright-Hatton et al., 2004; 430) and as suggested in section 2.5.1, may be delivered on universal, indicated, selective or individual bases (Neil and Christensen, 2009; 208, Kavanagh et al., 2009).

“CBT is based on the underlying (psychological) assumption that affect and behaviour are largely a product of cognitions and, as such, that cognitive and behavioural interventions can bring about changes in thinking, feeling and behaviour” (Kendall, 1991). That is; CBT considers the relationship between thoughts, feelings and behaviour (Shucksmith et al, 2007) and works on the premise that these factors may prompt and maintain mental health needs (Figure 2.4).

CBT intervention is driven by an on-going process of hypothesis formulation during which practitioners seek to ascertain the reasons behind an individual's current emotional needs. CBT incorporates approaches from Cognitive and Behaviourist Psychology in light of the often complex interaction between a multitude of cognitive, interpersonal, emotional and environmental factors in the development of young people's anxieties (King, Heyne and Ollendick, 2005; 243). This involves educating individuals about the role of thoughts/cognitions in the development of mental health needs, as cognitive distortions/misinterpretations of circumstances can often prompt feelings of anxiety/worry (ibid; Kendall, 1994). Typically, CBT support involves training in cognitive skills (i.e. cognitive restructuring, problem-solving, identifying negative self-statements) or behavioural skills (e.g. relaxation strategies) and graded exposure to distressing/fearful stimuli (Hudson, 2005; 162; King, Heyne and Ollendick, 2005; 243). Whilst the

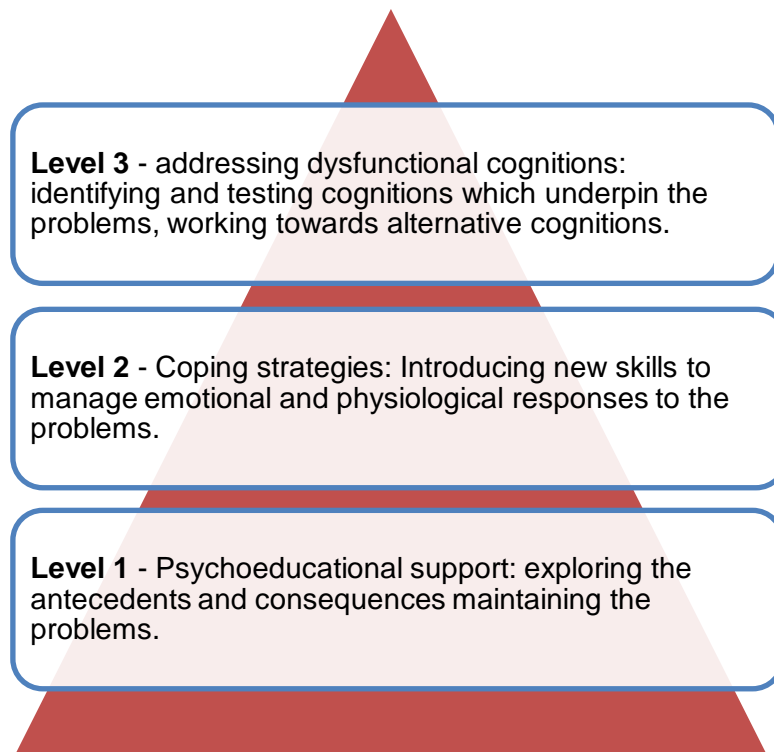
focus of CBT support may vary from one participant to the next, all programmes share several key principles (Stallard, 2005; 129):

- A functional analysis of the presenting problem(s) to determine important factors associated with onset and maintenance;
- An emphasis upon psychoeducation;
- Interventions tailored to addressing the presenting problem(s);
- A focus upon relapse prevention and generalisation of skills.



**Figure 2.4 - An illustration of the multidirectional relationship underpinning Cognitive Behavioural Therapy**

To illustrate this approach, Stallard (2005; 7) proposed a three-tier model to CBT support (Figure 2.5) with level one considered the starting point. The relationship between cognitions, behaviours and emotions (illustrated in Figure 2.4) is considered in greater detail in Figure 2.6 (Stallard, 2005; 8).



**Figure 2.5 - An illustration of Stallard's three-tier model of CBT support  
(Stallard, 2005; 7)**



**Figure 2.6 -The clinician's toolbox (Stallard, 2005; 8)**

### **2.5.3 Anxiety regulation**

Following the introduction of CBT principles in the preceding section, it is important to now consider the concept of anxiety regulation.

The author conceptualises anxiety regulation abilities as representing part of the broader construct of 'emotional regulation abilities'. Emotional regulation abilities have been operationalised as a heterogeneous range of strategies/actions designed to manage which emotions individuals experience, when they are experienced, and how they are expressed (Gross, 1998). Emotional regulation can therefore be understood as an individual's efforts to determine the type, frequency and duration of emotional responses, and to address the contextual factors which may lead to or follow on from an emotional response (Cisler et al., 2010).

In line with those key CBT principles outlined in Figure 2.6, the author understands anxiety regulation to represent an individual's ability to call upon a range of cognitive, emotional, physiological and behavioural strategies for managing anxiety and/or addressing the possible source of such anxieties. Effective anxiety management therefore entails proficiency in the selection and utilisation of strategies that may be considered to be age-appropriate and suitable to the context within which the individual's anxieties arise. Anxiety regulation may manifest itself in many ways, with examples including: situation selection/avoidance (e.g. taking an alternative route to avoid walking over a bridge); distraction; cognitive restructuring, and situation modification (e.g. telling others that you would rather not discuss a topic, if it is raised).

Evidence has suggested that populations experiencing anxiety disorders demonstrate difficulties with emotional regulation (see Amstadter, 2008 for a review), including inflexible or inappropriate choices of regulation strategies. However, such research is in its infancy and appears primarily restricted to studies including adult samples. One study (Salters-Pedneault et al., 2006) reported that participants with a diagnosis of Generalised Anxiety Disorder (GAD) experienced a range of emotional regulation difficulties including: limited acceptance of emotions; difficulty engaging in goal-orientated

behaviours, and poor impulse control, albeit this sample of 325 participants had a mean age of 23.8 years (range 18-62 years) and therefore lacked direct applicability to this study.

Given these tentative indications that emotional regulation difficulties may be associated with the development of anxiety difficulties, anxiety intervention (such as that included within the current study) should give consideration to developing the anxiety regulation capabilities of participants, in order to increase young people's confidence and competence with managing/addressing challenging emotions, such as anxiety, in future. The author suggests that developing competency in anxiety regulation will be of importance to children and young people given the range of potential anxiety-invoking situations experienced in childhood and adolescence, with Barrett (2000) stating that learning to manage anxieties represents a key part of children and young people's development.

#### **2.5.4 The use of CBT within schools**

School-based CBT fits with the notion of community psychology, introduced in section 2.4, locating therapeutic support within the child's naturalistic environment, within which their anxieties may be occurring.

It has been claimed that EPs have a key role to play in the implementation of CBT in schools (Stallard, 2005, Rait et al., 2010), through collaboration with teaching staff and other professionals, given their working knowledge of schools' systems, hierarchies, priorities, resources and constraints and the impact these factors may have on the learning, behaviour, emotional needs and inclusion of young people (Rait et al., 2010). EPs' ability to position themselves so that they may a) work within the school system, and/or b) observe the school system from a distance means that they are arguably in an ideal position to support school staff, who may be more directly involved in the implementation of CBT interventions.

EPs may be ideally placed to support the development of such support, given their knowledge of applying psychological principles within educational contexts. Furthermore, Kurtz (2004) advocated a move away from CAMHS-

based intervention with mental health needs, towards a more community-based model of support. In a critique of the CAMHS model of service delivery, Kurtz stated that:

- Children and young people's difficulties may worsen during a long wait for support.
- Intervention in clinic-based settings implies within-child causality for anxiety.
- Waiting lists for those with the greatest need may deter some families.

Squires (2010) added that a shortage of professionals within mental health services provides an opportunity for, and places an onus upon, EPs to incorporate CBT-based approaches into their practice within community settings. Squires subsequently cited the need for CBT-based training within EP Professional training courses (Squires and Dunsmuir, 2011).

Additionally, Farmer et al (2003) highlighted that approximately 70% of students now receive support for mental-health needs in schools; therefore the delivery of early intervention support for anxiety in schools may become common practice for EPs and school staff alike. This possibility is in keeping with the CAMHS four-tier model of service delivery (Figure 2.3), whereby EPs may provide specialist mental health support at tier 2 or practice supervision and guidance to school staff providing mental health support at tier 1. Many other authors advocate the applicability of CBT with children, young people and their families (see Stallard, 2005; Stallard et al., 2008; Fuggle, Dunsmuir and Curry, 2013; Barrett, 2004), prompting the need for an exploration of the empirical evidence behind these claims. This forms the basis of section 2.5.5.

### **2.5.5 Empirical evidence relating to the use of CBT with children, young people and families**

The current author conducted a systematic review of the range of treatments available to children and young people experiencing anxiety in mainstream educational settings (Lake, 2012). The review included studies from 1995-2013, participants had to be based within a mainstream school setting and

had to be of compulsory school age for the nation within which their respective studies were located. Studies were included if they reported on the implementation of an intervention programme targeting the reduction of anxiety-related symptoms for students at risk of or experiencing anxiety within school contexts.

13 studies were included and Table 2.1 outlines the key features of each study. The review included 6 CBT-based intervention programmes, with 'FRIENDS' (Barrett, 2004) being the most commonly evaluated intervention, appearing in five studies (38%). A range of intervention delivery methods were apparent, with 5 (38%) whole-class interventions and 4 (30%) selective interventions. 4 studies (30%), however, did not clearly identify their model of delivery. Additionally, no indicated or individual studies were apparent. The majority of school-based interventions ( $n = 6$ , 46%) were implemented by Clinical Psychologists, whilst 5 programmes (38%) were delivered by teaching staff trained in CBT. Only 1 programme was delivered collaboratively by psychologists and teachers. The high involvement of Clinical Psychologists is representative of the international nature of the studies reviewed – only one study was based in the UK – and it is possible that Clinical Psychologists have a different remit in other nations. 80% of the total universal studies ( $n=5$ ) and 75% of the selective studies ( $n=3$ ) employed control groups, enabling comparisons of group progress. Of these studies, 3 universal (75%) and 2 selective (66%) reported significant intervention effects for reducing anxiety symptoms. The review highlighted the applicability of using CBT with students from a large age range (i.e. 7-17 years), whilst also indicating that teachers can be considered effective programme leaders once trained. Several studies included in this review reported significant results at follow-up data collection points, giving tentative support to the longer-term efficacy of in-school CBT interventions.



<b>Authors</b>	<b>Year</b>	<b>Programme type</b>	<b>Group size</b>	<b>Sample age</b>	<b>Sample size</b>	<b>Lead professional</b>	<b>No. of sessions</b>	<b>Study type</b>	<b>Control group</b>
Dadds et al. 1997	1997	'Coping Koala' (CBT)	Max. 12 pupils	7-14yrs	128	Clinical Psychologist	10	RCT	Yes
Barrett & Turner 2001	2001	'Friends for Children' (CBT)	Whole-class	10-12yrs	489	Teacher and Psychologist	12	RCT	Yes
Masia et al. 2001	2001	SASS (CBT)	6 pupils	14-17yrs	6	Clinical Psychologist	14	Pre-test/post-test non-equivalent	No
Lowry-Webster et al.	2001	FRIENDS (CBT)	Whole-class	10-13yrs	594	Teachers	10	RCT	Yes
Lock & Barrett	2003	FRIENDS (CBT)	Whole-class	9-10yrs	733	Clinical Psychologist	10	Longitudinal RCT	MG

Mifsud & Rapee	2005	'Cool Kids'	Max. 10 pupils	8-11yrs	91	School counsellors	8	RCT	WLC
Masia-Warner et al.	2005	SASS (CBT)	Not specified	13-17yrs	35	Clinical Psychologist	12	RCT	WLC
Masia-Warner et al.	2007	SASS (CBT)	Not specified	14-16yrs	36	Clinical Psychologist	12	RCT	AC
Stallard et al.	2008	FRIENDS (CBT)	Whole-class	9-10yrs	106	School nurse	10	pre-test/post-test one-group quasi-experimental	No
Manassis et al.	2010	'The feelings club' (CBT)	Max. 10 pupils	Grades 3-6. Age range	145	Clinical Psychologist	12	RCT	AC

				not specified					
Miller et al.	2011a	FRIENDS (CBT)	a. No. per group not specified	a. mean 10.1yrs	191	Teachers	10	RCT	AC
			b. whole- class	b. mean 9.8yrs	253	Teachers	10	RCT	AC
Miller et al.	2011b	SASS (CBT)	No. per group not specified	13-17yrs	26	Teachers	12	pre-test/post- test one- group quasi- experimental	No

**Table 2.1 – A table summarising the findings of the systematic literature review undertaken by Lake (2013).**

The review builds upon the evidence derived from other reviews, such as Neil and Christensen (2009) who reviewed studies advocating preventative support with children and young people's anxiety. Their review included 27 school-based studies, of which 78% implemented CBT. 21 studies (78%) indicated significant anxiety reductions for participants, but were not limited to CBT-based trials alone. When effect sizes were considered, some CBT interventions were only slightly more effective than alternative interventions, whilst some CBT-based interventions failed to reduce anxiety. The authors concluded that further research is needed regarding the efficacy of school-based CBT, including the need for long-term follow-up data, attention-control conditions and evaluations of teacher-based delivery.

The CBT evidence base also includes investigations into the efficacy of the approach with young people with higher-level needs (discussed further in 2.7). In a systematic review of 13 randomised control trials (RCTs; James, Soler and Weatherall, 2005) the authors incorporated studies implementing CBT for participants with diagnosed anxiety disorders. 56% of participants in intervention groups made significant progress compared to 28.2% from control groups.

James et al. (2013) reviewed 41 studies of CBT support for participants (n=1806) with recognised anxiety disorders across school, university and clinic-based contexts. These studies were also reactive in nature, with the remission of anxiety diagnoses being the primary outcome investigated. 26 studies were included in a final 'CBT versus wait-list' analysis of remission of anxiety disorder, with 59.4% of participants no longer meeting diagnostic criteria post-CBT intervention, compared to 17.5% of control participants. However, six of these studies (426 participants) suggested that CBT may be no more effective than non-CBT active controls, leading these authors to conclude that whilst CBT can produce positive effects for anxious children and adolescents, further clarity is required regarding the mechanisms of change underpinning effective CBT support for children and young people.

### **2.5.6 FRIENDS – a CBT-based intervention programme**

When reviewing the empirical literature underpinning the use of CBT, it is notable that numerous studies (e.g. Stallard et al., 2008, Fisak, Richard and Mann; 2011) assess the efficacy of the 'FRIENDS' programme (Barrett, 2004). 'FRIENDS' is a Cognitive Behavioural intervention which may be delivered in schools on either individual, small-group or universal bases.

Paul (2011) evaluated the use of FRIENDS delivered in a universal manner with year 5 pupils (n=38) in England (9-10 years). Paul employed a quasi-experimental non-equivalent groups design (comparing intervention and wait-list control groups) into the intervention's impact upon participants' emotional distress and academic self-concept, and teacher-reported perceptions of behaviour. Significantly greater reductions were observed in teacher-rated hyperactivity and pupil-reported emotional-distress for pupils in the intervention group, compared to control-group peers. Control and intervention pupils exhibited significant improvements in both overall behaviour and prosocial skills, but there were no significant changes either between or within groups for academic self-perceptions. Limitations in these findings, akin to other such applied studies, lie in the comparison of non-equivalent groups, and in the absence of a comparison group.

Clarke (2011) conducted an RCT study into the efficacy of FRIENDS in reducing children and young people's anxiety, enhancing resilience and improving behaviour when implemented at a universal level, with year 5 participants (n=55) in an English primary school. No statistically significant changes were noted in behaviour or several aspects of resilience; however, a statistically significant reduction in anxiety was evident for an intervention condition, compared to a control group. These findings suggest that CBT may reduce children and young people's anxiety when delivered at a whole-class level, but the generalisability of these conclusions is limited, given the specific demographics of participants.

These findings, and those outlined previously are integral to the developing role of EPs within the domain of school-based mental health support. Whilst

direct therapeutic work with children and young people was previously indicated as occupying a small portion of the EP role (Farrell, 2006), commentators (McKay, 2002) have acknowledged that an increase in therapeutic work could be a future focus for the profession, either via direct intervention delivery or via the supervision of teaching personnel during intervention delivery.

## **2.6 The implementation of CBT programmes by school personnel**

Sections 2.5.2 and 2.5.3 make a case for school-based CBT programmes, with the role of school staff in therapeutic support outlined in tier 1 of Figure 2.3. It is therefore important consider the literature relating to the role of school staff in CBT delivery.

Green (2013) provides insights into the use of school personnel in the delivery of CBT interventions. In this study, School Learning Mentors delivered the 'FRIENDS' intervention (Barrett, 2004) for secondary school students (11-13 years) presenting as anxious in school. Mentors were expected to adapt the programme to suit the needs of participants and reported limited confidence in their ability to do so, leading Green to question the role of Learning Mentors and Teaching Assistants (TAs) in intervention implementation. Indications were that mentors found it difficult to implement a consistent pace to lessons, opting to carry out enjoyable activities with participants as opposed to activities directly linked to the intended learning objectives. Green also queried the extent to which a 'nurturing' mentor-student relationship may have impacted upon group leaders' willingness to challenge participants to attempt certain tasks.

Identifying those school staff responsible for programme delivery is also likely to be influenced by decisions made by senior management in schools. Several authors (Forman, Olin, Hoagwood, Crowe and Saka, 2009; Kam et al., 2003) highlight the importance of including senior management in the planning and implementation of intervention programmes, indeed Green (2013) argued that the active engagement of senior staff in the development

and delivery of 'FRIENDS' might have addressed key implementation issues and increased the likelihood of positive outcomes for participants.

When selecting school staff for programme delivery, there are a number of key considerations to be made. Authors (Rubie-Davies, Blatchford, Webster, Koutsoubou, and Bassett, 2010) suggested that teachers may demonstrate a higher standard of teaching during intervention delivery, compared to teaching assistants (TAs). They claimed that teachers were more able to link learning outcomes between sessions and were more competent in providing students with feedback. Additionally, Webster et al. (2011) suggest that teachers may be able to tailor CBT interventions to student need. Consideration must however be given to whether teachers will have the time to implement regular intervention sessions alongside their many other roles and responsibilities.

It may be more feasible for interventions to be delivered by teaching assistants, as is the case with many of forms of intervention, such as learning support, for example. Webster et al (2011) claim that if TAs are tasked with implementing intervention support, their role should be limited to delivering structured, pre-planned interventions, for which they have received prior training and will receive ongoing guidance from more qualified peers.

As the involvement of school staff in the delivery of programmes has been primarily restricted to teachers in studies to date (as per Table 2.1), there is a need for further research into the efficacy of intervention support when implemented by teaching assistant staff. If TAs can provide effective intervention support (with supervision from specialists, as per tier 1 of Figure 3) then this may be advantageous; providing students with support in their naturalistic setting, with assistance from staff with which students may already have a rapport. Whilst one study (Briesch et al., 2010) reported lower effect sizes when therapeutic support was provided by school personnel (compared to researchers/psychologists), the extent to which EPs may incorporate delivery of long-term interventions into their current remit, is questionable. It may be more advantageous to ascertain the conditions

through which the efficacy of interventions delivered by school personnel may be optimised.

## **2.7 Reactive versus preventative CBT intervention**

The following sections consider the use of CBT support via both reactive (i.e. with higher-level anxieties) and preventative (i.e. early intervention with initial anxiety symptomatology) means in order to illustrate how CBT support may address anxiety of differing severities.

### **2.7.1 Reactive CBT interventions**

Kendall (1994) conducted an RCT in which 47 students (9-13 years) with diagnosed anxiety disorders were enlisted to either intervention or control groups. Group performance comparison illustrated that 64% of participants in the intervention group did not meet diagnostic criteria for an anxiety disorder post-intervention; a trend maintained at a one-year follow-up. Whilst these findings provided an initial rationale for the use of CBT with those children and young people experiencing the greatest anxiety, ethical concerns are raised regarding the use of a control group for comparison purposes.

In contrast, Manassis et al., (2002) employed group-based *and* individualised CBT for addressing the anxiety disorders of 8-12 year olds. 78 participants were randomly allocated to either group-based or individualised CBT programmes, with both groups demonstrating reductions in anxiety symptomatology post-intervention. Participants diagnosed with social phobia made most gains when provided with individualised CBT. These findings illustrate the effectiveness of different CBT delivery methods; however the conclusions drawn may have been strengthened by using a wait-list comparison group, an adaptation which would negate some of the criticism made towards Kendall's use of a control group.

Silverman et al. (1999) sought to demonstrate the efficacy of group CBT for addressing anxiety disorders in children and young people. 41 participants



(6-16 years) were allocated to either treatment or wait-list comparison conditions. Post-intervention, 13% of wait-list participants no longer met diagnostic criteria, compared to 64% of intervention participants. These benefits for intervention attendees continued at 3-month follow-up and remained at 12-month follow-up. These findings: a) support the use of group CBT in schools and b) indicate that benefits may continue over time, raising questions regarding the mechanisms of change within CBT, and which elements of CBT input may enable participants to continue to manage their emotions post-intervention. Potential mechanisms of change are discussed further in section 2.8.

### **2.7.2 Preventative CBT interventions**

Preventative CBT-based interventions may be preferable to reactive support, as the intention is to support children and young people's well-being at the earliest opportunity, to avoid the need for individualised, specialist support with higher-level needs at a later date, as outlined in Figure 2.1.

The following studies consider the efficacy of CBT when used in a preventative sense within schools, providing support for the use of CBT for early intervention with anxiety.

Dadds et al. (1997) investigated the efficacy of indicated CBT support for both preventing and addressing anxiety disorders in 128 participants (7-14 years). They compared an intervention and control group, with the former group accessing 10 sessions of CBT. Approximately half of participants in the intervention group no longer met criteria for anxiety disorders post-intervention. Furthermore, whilst 16% of the intervention group developed an anxiety disorder 6 months after the study, 54% of the control group developed a disorder during the same time period. These results suggest that CBT may offer an effective means of addressing anxiety disorders, with *some* indication, of CBT support preventing anxiety disorders at 6-month follow-up, albeit these trends are from one study and would require replication across more recent research to increase the evidence for the use of CBT as a preventative intervention.

Similarly, Mifsud and Rapee (2005) conducted an RCT comparison study into the effectiveness of indicated CBT for reducing initial anxiety symptomatology. Participants (8-11yrs) were identified as experiencing early indications of anxiety via a screening process (Revised Children's Manifest Anxiety Scale, Reynolds and Richmond, 1978). Participants were allocated to an intervention group (n=50) or to a wait-list comparison group (n=41). 8 CBT sessions were delivered to small groups of 10 participants. Intervention participants demonstrated significantly greater reductions in anxiety post-intervention and this progress was replicated 4-months after the intervention. This study suggests the potential for the use of group-based CBT for intervening early with anxiety.

In a key UK study, Stallard et al. (2005) evaluated the universal delivery of FRIENDS across six primary schools. 197 pupils (9-10 years) participated. These pupils showed significantly reduced anxiety and significantly improved self-esteem post-intervention. 190 participants rated the 'acceptability' of this programme with responses indicating that 154 (81%) thought FRIENDS was 'fun' and 147 (77.4%) would recommend FRIENDS to their peers. These findings provide initial indications of the effectiveness of CBT when provided to whole-class populations and thereby support the notion of school-based CBT interventions.

Stallard et al. (2008) built upon this initial study, via another universal CBT intervention of the 'FRIENDS' programme. This study extended the evidence base for the use of CBT within UK Schools and provided tentative support for the preventative role of CBT via universal level delivery, in addition to the above indicated interventions. A quasi-experimental study with a pre-test/post-test one-group design included 106 participants from the same age range (i.e. 9-10 years) from 4 classes across 3 junior schools in the UK. Whole class sessions were embedded into the curriculum for one term, with participants displaying statistically significant improvements in anxiety post-intervention and at a 12-month follow-up, again suggesting that such support can be successfully embedded within the classroom context whilst producing longer-term positive outcomes. These findings are however limited by the

lack of a control group, meaning the natural maturation rate of pupil progress was not recorded.

With the emphasis upon early intervention within policies (TaMHS, DCSF, 2008; IAPT, Department of Health, 2006), it is surprising that (as highlighted in section 2.7) many studies have instead prioritised responsive intervention with those children and young people with the highest-level needs. For example, in the aforementioned review developed by the current author (Lake, 2012) only 4 studies were of a preventative nature.

Those papers outlined hitherto illustrate a range of studies investigating the use of CBT with children and young people experiencing anxiety; the number of studies reviewed here is by no means exhaustive. These studies contribute to the increasingly well-established evidence base for the implementation of CBT with young people experiencing such needs; however, many researchers within those studies reviewed indicated that they were seeking to intervene with populations experiencing anxiety needs of a greater severity. Given the cited importance of early intervention work (TaMHS, DCSF, 2008; IAPT, Department of Health, 2006) there remains a need for further investigation into the efficacy of preventative interventions, particularly with UK-based populations.

#### **2.7.2.1      *Level of intervention***

The studies outlined in sections 2.5-2.7.2 include 26 universal, 11 selective and 8 indicated CBT interventions, plus one individualised intervention.

The majority of studies reviewed were therefore implemented at a universal level of delivery, enhancing the evidence base for that particular format of CBT intervention. This is perhaps surprising given that several studies portrayed an intention to intervene with higher-level anxieties, which would typically warrant individualised support.

However, there appears to be less research into the use of small-group preventative (i.e. indicated) CBT interventions. Indeed, in a meta-review of 52 systematic reviews of mental health interventions, Weare and Nind (2011)

noted that only six focused on indicated/targeted interventions, whilst 14 highlighted the positive impacts of embedding indicated/targeted interventions within universal programmes of support.

Further research may also be required into the efficacy of indicated CBT delivery with a UK-based population, as the need for indicated interventions has been underlined by British legislation and Government policy (Department of Health, 2011; TaMHS, DCSF, 2008; IAPT, Department of Health, 2006).

### **2.7.2.2      *Age of participants***

Section 2.7.2.1 considered the level of intervention apparent within those studies discussed, highlighting the need for further research into the efficacy of indicated CBT interventions. Similarly, when the age-ranges of participants within the systematic review are considered, further shortcomings are identified within the existing evidence base.

Of those studies outlined thus far, participant populations have included a range of ages. The eldest participants included were approximately 14 years of age (Dadds et al., 1997), whilst the youngest participants were 7 years of age (ibid).

However, It is notable that those English studies included (i.e. Stallard et al., 2005; Stallard et al., 2008; Paul, 2011; Clarke, 2011) focus primarily upon supporting pupils within primary school settings (i.e. up to 11 years). This is significant, as more research into the use of CBT with an older British participant population appears warranted, given the views of local stakeholders (outlined in section 2.1), regarding the need to intervene with those anxieties experienced by secondary-age students within local schools.

## **2.8    The use of CBT approaches with young people - potential mechanisms of change**

Whilst the empirical evidence outlined above indicates that CBT may be an effective means of addressing anxiety, several authors (King, Heyne and

Ollendick, 2005; Hudson, 2005; James, James, Cowdrey, Soler and Choke, 2013) state that more information is needed regarding how CBT may produce positive outcomes. Common aspects of CBT interventions are outlined in section 2.5.2 and Figure 2.6, with several authors (Hudson, 2005; Fuggle, Dunsmuir and Curry, 2013) citing 'cognitive distortions' as central to the development of those anxieties experienced by young people, suggesting the need to address negative cognitions, in order to produce positive change. Despite these claims, many studies have instead investigated CBT's ability to produce changes in anxiety symptomatology and very few studies have investigated which specific CBT mechanisms may produce positive outcomes.

One multiple-baseline Single-Case Experimental Design (SCED) study (Eisen and Silverman, 1993) compared cognitive restructuring (& exposure), relaxation training (& exposure) and relaxation plus cognitive restructuring (& exposure) in four young people experiencing anxiety. All four participants were diagnosed with anxiety disorders prior to the study. All participants demonstrated post-intervention improvements on self-report, parent-report and clinician-report indices of anxiety, moving from clinical to normative scoring ranges, suggesting that gradual exposure to anxiety-provoking situations may be a key element of CBT. These conclusions are preliminary, however, given the more tentative conclusions available from SCEDs, in the view of some.

There is evidence that CBT may produce positive outcomes for school refusal by helping students to increase their self-confidence with attending school; something which other preventative interventions may need to consider. In a study of anxiety-based school refusal (Maric, Heyne, MacKinnon, van Widenfelt and Westenberg, 2013) found that increased school attendance and decreased attendance-based anxiety were mediated by student perceptions of self-efficacy, underlining the potential importance of efficacy-increasing activities within CBT. 19 participants (12-17 years) were assessed post-intervention and at follow-up. However, the lack of a control

group limits the extent to which participant progress may be attributed to CBT input.

The evidence interrogated thus far suggests a need for further investigation into the efficacy of indicated CBT interventions, particularly with UK-based students. More research into the use of CBT with UK-based secondary school populations also appears warranted. This section has also highlighted that more information regarding the mechanisms of positive change is required, to increase understanding of the effective elements of CBT and optimise intervention efficacy.

## **2.9 Systematic literature review of CBT intervention support**

### **2.9.1 Purpose of the systematic literature review**

The researcher was interested in undertaking a systematic literature review into the existing research for the use of indicated CBT interventions with secondary school students. Systematic literature reviews are less narrative by nature and involve:

- (i) The use of explicit, rigorous search strategies;
- (ii) Synthesising a range of research studies, which are included within the final review on the basis of explicit inclusion criteria, in order to avoid bias;
- (iii) The identification of studies from a range of relevant sources.

(Higgins and Green, 2012).

A systematic review seeks to minimise bias when exploring a field of interest, through utilising “explicit methods in order to maximise the production of valid and reliable findings” (Evans, Harden and Thomas, 2004; 4). The focus of this review is derived from the concluding comments of the previous section (2.8) and the findings of the earlier review by the current author (Lake, 2012); i.e. the existing evidence interrogated thus far suggests a need for further investigation into the efficacy of indicated CBT interventions, particularly with UK-based, secondary school students. The purpose of this systematic review, therefore, was to explore the extent to which indicated CBT

interventions are underpinned by empirical evidence and ascertain whether further research may be warranted.

This review process contributed to the formulation of the research questions for the current study (outlined in section 2.11). The following sections include:

- An outline of the search strategy used (2.9.2);
- The inclusion criteria against which studies were considered (2.9.3);
- Methods undertaken for appraisal of those studies selected (2.9.4);
- Descriptions of those studies obtained (2.9.6). Studies are presented in the order in which they were identified;
- A summary of key features from those studies reviewed (2.9.7).

The overall research question for the systematic literature review was:

**“What is the evidence base for indicated CBT interventions with students of secondary school age?”**

## **2.9.2 Search strategy**

Throughout the course of the literature search, the following terms were used:

- Anxiety;
- School pupils and/or school students;
- Cognitive Behavioural Therapy;
- Prevention;
- Early Intervention.

The literature search included the PsycINFO, Scopus, Web of Knowledge, Google Scholar and British Psychological Society databases. Figure 2.8 illustrates the search process undertaken and those papers obtained at each stage. Exploring a range of databases is important, in order to minimise selection bias (Higgins and Green, 2011; 6.1.1.2).

Additionally, the PsycINFO database allows for search terms to be defined in greater detail using the 'advanced search' option. Therefore, the following terms were used when searching this database:

- Anxiety (generalised anxiety disorder; performance anxiety; separation anxiety; social anxiety; test anxiety);
- School pupils (Secondary Education; Junior High School Students; High School Students; Elementary School students);
- Cognitive Behavioural Therapy;
- Prevention;
- Early Intervention.

Papers meeting the search criteria for each database were initially accessed via their abstracts. Where necessary, papers were studied in greater detail to ensure that the contents met the inclusion criteria outlined in section 2.9.3, below.

### **2.9.3 Study selection and inclusion criteria**

The following inclusion criteria were used for this review:

- (i) Studies were selected from 1996 to 2013 to ensure a relatively current evidence base was considered.
- (ii) Studies must report on the implementation of a CBT intervention programme, delivered on an indicated basis (i.e. small-group format with an early intervention focus). Intervention must target the prevention and reduction of anxiety-related symptoms for pupils at risk of anxiety within a school context.
- (iii) Following on from point (ii), participants must show initial signs of anxiety, i.e., they did not have a diagnosed disorder at the beginning of the intervention.
- (iv) Participants must be based within a predominantly English-speaking education system and preferably based within the UK education system.



- (v) Students must be of an age equivalent to that of a secondary school student within the UK education system.
- (vi) Participants and intervention must both be based within a non-clinical, mainstream school setting.

**Types of intervention included:**

A specific focus was given to identifying indicated interventions. No specific CBT intervention programme was prioritised, in order to identify a wider range of existing approaches related to the review research question.

**Type of study designs considered:**

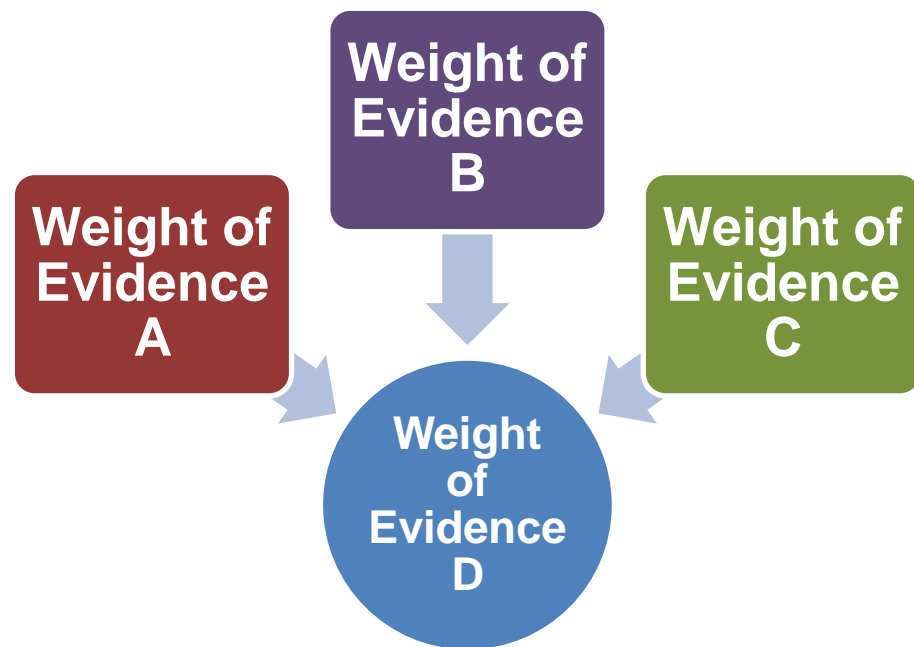
Searches were not restricted to specific study designs, in an attempt to avoid limiting the number of intervention studies identified.

**Study purposes and outcomes:**

Included studies had to focus upon preventing the escalation of anxiety, intervening early with initial signs of anxiety symptomatology.

**2.9.4 Appraisal of studies**

The Weight of Evidence (WoE) framework (Gough, 2007) was used to review and appraise each study selected. This appraisal method provides quality ratings for each study (Figure 2.7).



**Figure 2.7 - Weight of Evidence Framework (Gough, 2007).**

**Weight of Evidence A** – A ‘judgement about the coherence and integrity of the evidence in its own terms’ (ibid; 223) i.e. does the design used (e.g. Randomised Control Trial) demonstrate the key features of this design?

**Weight of Evidence B** – considers the appropriateness of the form of evidence for answering the research question of the study from which it originates.

**Weight of Evidence C** – considers the relevance of the study’s evidence to the systematic review question.

**Weight of Evidence D** – an overall weight of evidence based on weightings A-C.

### **2.9.5 Studies identified per database**

#### **PsycINFO:**

The advanced search function returned eight articles following the utilisation of search terms as ‘key words’ (i.e. identifying search terms anywhere within the text of the article). Four appeared relevant on the basis of information derived from each abstract, yet limited access permissions (via the University

of Nottingham's e-gateway) meant that these options had to be discounted. Of the eight articles identified, three met inclusion criteria for the review (Karimi and Venkatesan, 2009; Muris et al, 2009; Rice, 2008).

### **Scopus:**

The terms 'School AND anxiety AND children AND Cognitive Behavioural Therapy' returned 441 articles but only one met the inclusion criteria for this review (Muris, Meesters and Van Melick, 2002). Unfortunately, four RCT studies (Pina et al, 2012; Reaven et al, 2012; White et al, 2009 and Sofronoff et al, 2005) investigating indicated CBT intervention with young people's anxiety did not meet the inclusion criteria for this review, due to the age of the participants (Pina et al, 2012) and the use of clinic-based settings only (Reaven et al, 2012, Sofronoff et al, 2005, White et al, 2009).

### **Web of Science:**

The terms 'anxiety AND children AND school AND cognitive behavioural therapy OR cognitive behaviour therapy AND prevention' retrieved 262 articles. Only five met inclusion criteria, one of which had already been identified via the search of the Scopus database. Four further studies were therefore obtained (Chiu and Langer et al., 2013; Bernstein, Layne, Egan and Tennison, 2005; Miller et al, 2011a and 2011b). One study (Miller et al., 2011b) was subsequently omitted from this review due the universal nature of intervention delivery.

### **British Psychological Society:**

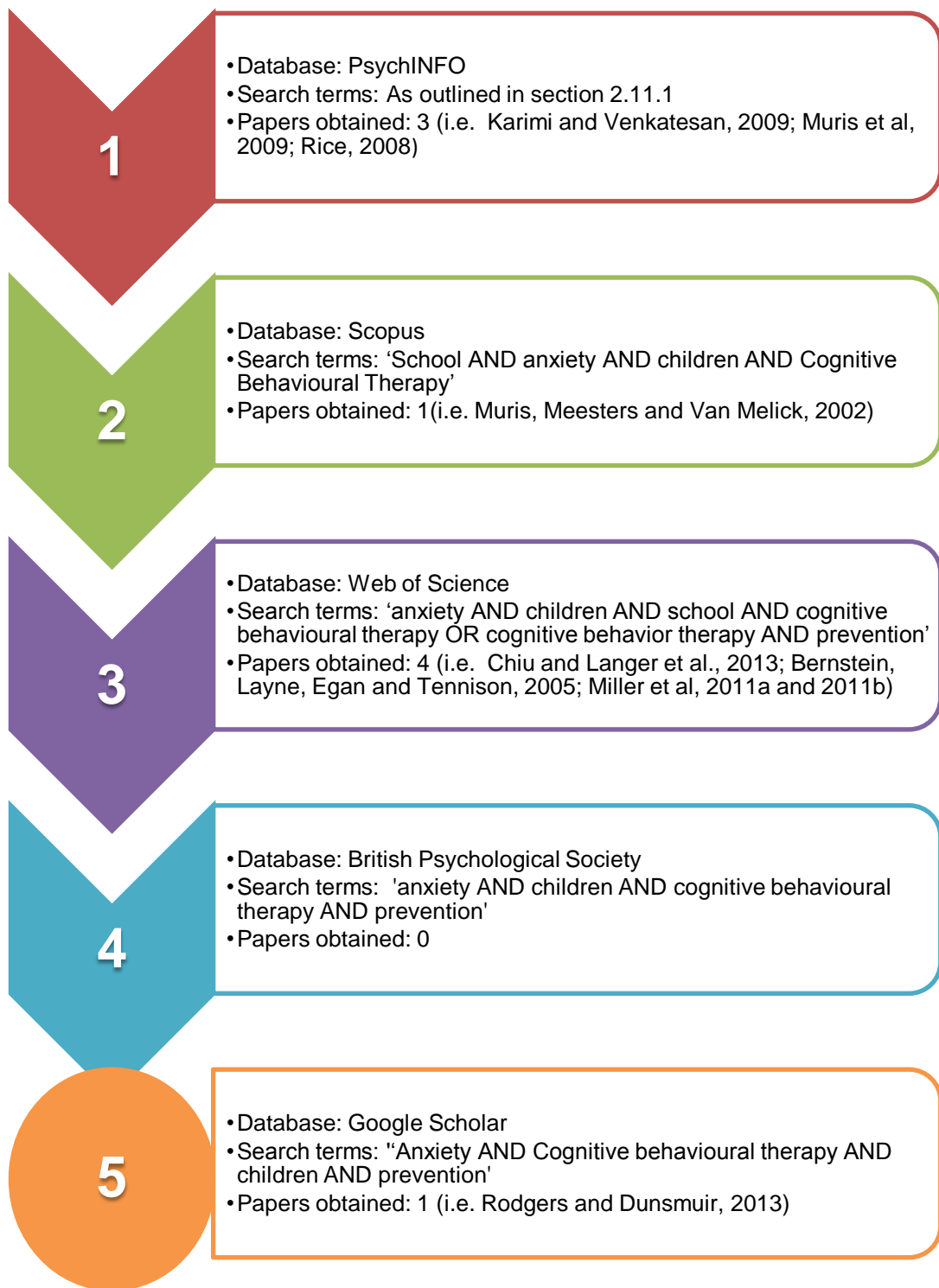
This database was accessed via the University of Nottingham e-library gateway. A keyword search for articles containing the terms 'anxiety AND children AND cognitive behavioural therapy AND prevention' returned a total of five articles, none of which met the inclusion criteria.

### **Google Scholar:**

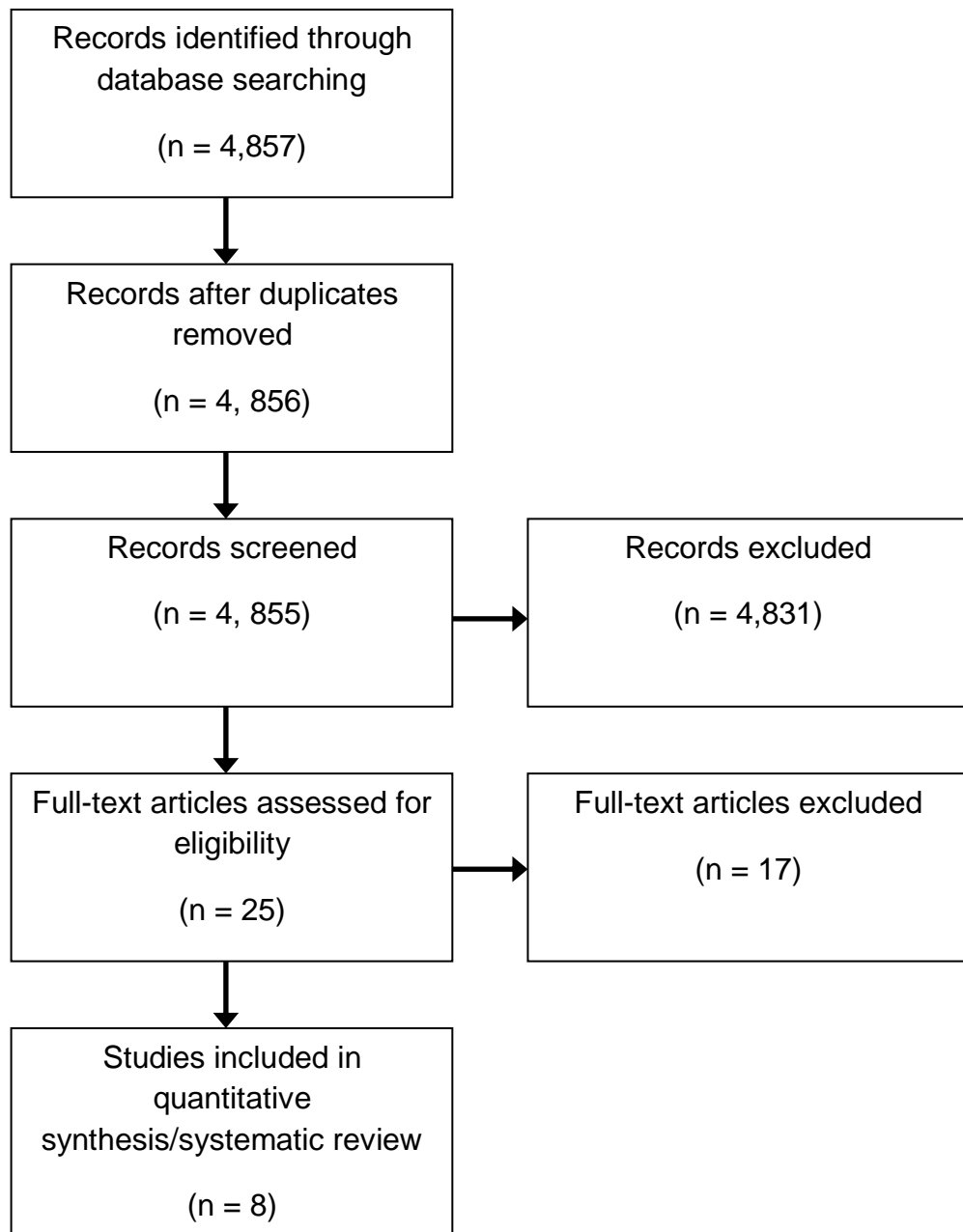
The advanced search option was used in the Google Scholar search engine. Initially, the terms 'Anxiety AND early intervention AND secondary school

AND United Kingdom AND cognitive behavioural therapy AND prevention AND pupils AND adolescent' were included in a key words search for words located anywhere within an article's text. This returned 4,140 articles making it necessary to narrow the search. The search terms were then refined to 'Anxiety AND Cognitive behavioural therapy AND children AND prevention (key words in title and article text). This revised search returned three articles, one of which met the inclusion criteria for the systematic review (Rodgers and Dunsmuir, 2013).

Therefore from 4,856 articles across five databases, 8 articles both met the inclusion criteria and were accessible at the time of the systematic literature search. These studies are now reviewed in further detail.



**Figure 2.8 - Flowchart of database searches**



**Figure 2.9 - PRISMA Flow Diagram of database searches (From: Moher, Liberati, Tetzlaff and Altman, 2009).**

### 2.9.6 Descriptions of included studies

Table 2.2 provides an overview of the final evidence weightings given to those studies described below; further tabulated information is included in appendix 3.

<b>Study</b>	<b>WoE A: Methodological Quality</b>	<b>WoE B: Methodological Relevance</b>	<b>WoE C: Relevance to the Review Question</b>	<b>WoE D: Overall weight of evidence</b>
Muris et al. (2009)	High	Medium	Medium	Medium
Karimi and Venkatesan (2009)	High	High	Medium	Medium
Rice (2008)	High	High	High	High
Muris et al. (2002)	High	High	Medium	High
Chiu et al. (2013)	High	High	High	High
Miller et al. (2011)	High	High	High	High
Bernstein et al (2005)	High	High	High	High
Rodgers and Dunsmuir (2013)	High	High	High	High

**Table 2.2 - Weightings given to those studies included in the systematic literature review (with reference to Gough, 2007)**

**Study one:** Muris, P., Mayer, B., den Adel, M., Roos, T. and van Wamelen, J. (2009) Predictors of Change Following Cognitive-Behavioral Treatment of Children with Anxiety Problems: A Preliminary Investigation on Negative Automatic Thoughts and Anxiety Control. **Child Psychiatry & Human Development.** 40 (1); pp.139–151.

Muris et al investigated the impact of CBT support upon the negative automatic thoughts (i.e. dysfunctional cognitions) and self perceived levels of anxiety control of young people with anxiety disorders. Children and young people were recruited from five mainstream Netherlands primary schools; the structuring of the age ranges within the schools means some participants were relevant to this review. An initial screen of 178 young people (9-12 years; 86 male) resulted in a sample of 45 participants (23 male, 22 female; mean age = 10.33 years, SD = 1.04) whom both a) received parental consent for participation and b) scored in the top 10% of the sample for symptoms of social phobia (n = 22), separation anxiety disorder (n = 18), and/or generalized anxiety disorder subscales (n = 27). The initial screen was undertaken using the 'Revised version of the Screen for Child Anxiety Related Emotional Disorders' (SCARED-R; Muris et al., 1999).

'The Coping Koala' CBT programme (Heard, Dadds and Rapee, 1991) was used, comprising twelve 30 minute sessions, delivered on a small-group basis. Participants were allocated to groups of 3-6 peers with intervention sessions conducted by trained Clinical Psychology Masters Students. Treatment effects were evaluated by the use of three measures:

(i) SCARED-R (Muris et al., 1999):

The SCARED-R demonstrates adequate internal consistency, sufficient test-retest reliability, and validity in that it correlates well with other childhood anxiety measures and is considered to differentiate between young people who are and are not experiencing anxiety.

(ii) Children's Automatic Thoughts Scale (CATS; Schniering and Rapee, 2002):



The CATS assesses children and young people's negative beliefs regarding social threat (10 items: e.g., "Kids will think that I am stupid"), physical threat (10 items: e.g., "I am going to have an accident"), personal failure (10 items: e.g., "I can't do anything right"), and hostility (10 items: e.g., "I have the right to take revenge on people if they deserve it").

(iii) Anxiety Control Questionnaire for Children (ACQC, Weems, Silverman, Rapee and Pina, 2003):

This measure explores children and young people's perceptions of their own control over external triggers, which may in turn prompt feelings of anxiety.

Paired t-test analyses of pre and post intervention ratings illustrated that anxiety symptomatology significantly reduced post-intervention. Changes in negative automatic thoughts and anxiety control over the course of intervention were also statistically significant with negative automatic thoughts decreasing, whilst perceived anxiety control increased. CBT resulted in a significant decrease of children and young people's anxiety disorder symptoms. Changes in anxiety symptomatology were therefore linked to changes in negative automatic thoughts and self-perceptions of anxiety control, underlining the importance of these factors as mediators for positive CBT outcomes. These two factors were not significantly linked to one another however, underlining their equal but independent importance as part of CBT support and suggesting that one should not be prioritised over the other.

WoE 'A' was rated 'high' as this study exemplified all features of a one-group pre-test/post-test quasi-experimental design. WoE 'B' was rated 'medium', given the lack of a control group. Whilst the efficacy of CBT support appears to correlate with an increase in perceived ability to cope and a reduction in negative thought processes, it is difficult to ascertain whether these trends would have been observed in an equivalent control sample. As such, WoE 'C' is also rated 'medium' and would have been strengthened via a larger sample size and UK-based population, given the purposes of this systematic review. Only some of the participants are of an age relevant to the current review. In light of these reflections WoE 'D' is rated 'medium'.

**Study two:** Karimi, J. and Venkatesan, S. (2009). Cognitive Behavior Group Therapy in Mathematics Anxiety. **Journal of the Indian Academy of Applied Psychology**. 35 (2); pp.299-303.

A study into the use of group-based CBT for addressing one specific area of performance anxiety; Mathematics Anxiety. 23 participants (13-16 years) were divided between intervention (n = 16, 8 male) and control (n = 17, 8 male) groups. All participants demonstrated heightened levels of Mathematics anxiety symptomatology, as measured by the 'Mathematics Anxiety Rating Scale' (MARS, Alexander and Martray, 1989). The intervention group accessed a small-group CBT programme for 15 sessions of 90 minutes, twice a week; delivered by two Psychology Doctoral students.

A series of repeated measures ANOVAs demonstrated that group-based CBT was highly effective in reducing participants' levels of Mathematics anxiety on two specific subscales; test anxiety and numerical anxiety. A statistically significant reduction in overall scores for Mathematics Anxiety was recorded, irrespective of groupings ( $F = 36.123$   $p < .000$ ); indicating that all participants (experimental *and* control) experienced a reduction in their anxiety over the course of the intervention period. The CBT-related reductions were noted in 'Maths test domain' and 'numerical domain' suggesting that experimental group participants felt less anxious with regards to examinations or handling numerical data after CBT support.

WoE 'A' was rated 'high' as aspects of a quasi-experimental design were accounted for. WoE 'B' was rated 'high' given the comparison of an experimental group with a non-experimental control; this could have been strengthened further by triangulation of data sources (e.g. parent and/or teacher measures) and a long-term follow up measure. WoE 'C' was rated 'medium' on the basis of the generalisability of these findings to the current study and intended sample. A small, geographically specific sample was utilised in the investigation, whilst the area of need focused upon represents only one type of performance anxiety. The overall weighting (WoE 'D') was rated 'medium' given the limited external validity of these findings.

**Study Three:** Rice, C.L. (2008). **Reducing Anxiety In Middle School And High School Students: A Comparison Of Cognitive-Behavioral Therapy And Relaxation Training Approaches.** Degree of Doctor of Philosophy Dissertation. University of Arizona.

Rice conducted a quasi-experimental investigation into the efficacy of CBT intervention support with relaxation training for reducing the level of anxiety experienced by school students, when delivered in an indicated manner to 20 United States Middle and High School students from Grades 5 to 12 (10-18 years). Students recording *T* scores of > 60 on either an anxiety scale of the Multidimensional Anxiety Scale for Children (MASC, March et al., 1997); or a parent rating scale or teacher report form from the Child Behavior Checklist (CBCL, Achenbach, Rescorla, 2001) were selected. Participants were allocated to either a CBT intervention group (*n* = 7), a relaxation training group (*n* = 7) or a control group focusing upon study skills but without therapeutic input (*n* = 6). The CBT (71%) and the relaxation (67%) groups were predominantly male whilst the control group included equal numbers of male and female participants.

- The CBT condition: Participants accessed 16 sessions of 'The Cognitive Behavioral Treatment of Anxious Adolescents' (Kendall et al., 2002); a manual-based intervention deliverable via either group or individual formats.
- The relaxation condition: Participants accessed 16 sessions containing taught input regarding muscle relaxation strategies and the identification of physiological signs of anxiety based on frameworks devised by Morris and Kratochwill (1983; Morris et al., 2008).
- The study skills (control) condition: Participants received 16 sessions of support for organisational skills and study techniques, derived from the 'Study Skills and Strategies' programme (Mangrum and Strichart, 2005a, 2005b).

Experimental outcomes consisted of pre-test/post-test performance comparisons (by group) in terms of:

- (i) Total anxiety score on the MASC, and;

- (ii) Ratings on the anxiety problems scale and the internalizing problems scale of the student, parent *and* teacher versions of the CBCL.

Results showed that all three groups demonstrated lower overall anxiety scores post-intervention, as measured by the pupil-report MASC. No statistically significant differences were found between the three conditions with regards to teacher or parent perceptions of pupil anxiety, with the exception of the parent-report version of the CBCL anxiety subscale.

A 3x2 MANOVA demonstrated a statistically significant group-by-time interaction, indicating that the CBT group participants had significantly lower post-intervention scores on the MASC, when compared with peers from the relaxation and control conditions.

Investigations into the parent scores on the anxiety subscale of the CBCL highlighted a significant group-by-time interaction in that parent ratings of pupil anxiety were significantly lower for parents of participants in the CBT group at post-intervention.

Ratings of pupil anxiety from parents of participants in the CBT and relaxation groups were significantly lower at post-intervention compared to pre-intervention and again significantly lower at a follow-up measure than at pre-intervention. No significant time effects were recorded between post-test and follow-up measures however, suggesting that participation in these conditions led to a reduction in parent-reported perceptions of pupils' anxiety and that these perceptions remained stable over time.

WoE 'A' was rated 'high' with a high level of structure notable in the quasi-experimental comparison study. WoE 'B' was rated 'high' with the study employing comparisons of CBT with alternative approaches and control conditions to explore the value added by CBT support. WoE 'C' was rated 'high'; Rice's study is able to contribute to the purposes of this current review and directly demonstrates the applicability of indicated CBT intervention for addressing early anxiety symptomatology in secondary-age students. These high ratings would have been strengthened further by larger sample sizes and the use of a UK-based sample. WoE 'D' was consequently rated 'high'.

**Study four:** Muris, P., Meesters, C. and van Melick, M. (2002). Treatment of childhood anxiety disorders: a preliminary comparison between cognitive-behavioral group therapy and a psychological placebo intervention. **Journal of Behavior Therapy and Experimental Psychiatry** 33 (3-4); pp.143–158.

Muris et al (2002) conducted an RCT investigation into the efficacy of indicated CBT support for children and young people experiencing anxiety. Thirty participants (9-12 years) were randomly allocated to CBT (3 = male), psychological placebo (4 = male) or control (3 = male) conditions (n = 10 in each). Intervention outcome measures were taken at a baseline/screening assessment (3 months prior to intervention support) pre-intervention (1 week prior to intervention support) and post-intervention. Measures included:

- (i) The RCADS Revised Children's Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000): adapted from the Spence Children's Anxiety Scale (SCAS; Spence, 1998) this measures symptoms of anxiety disorders and depression.
- (ii) The State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973): incorporating 20 questions assessing key symptoms of anxiety.

288 Netherlands children (grades 6-8) completed the RCADS screening process. Participants for the three conditions were selected if they scored within the top 10% for generalised anxiety disorder, separation anxiety or social phobia; thereby indicating anxiety on a pre-diagnosis basis.

The study conditions were threefold:

- CBT condition: Participants accessed 12 session of the 'Coping Koala' intervention (Barrett et al., 1996); a manual-based adaptation of the 'Coping Cat' programme (Kendall, 1990).
- Placebo condition: participants accessed the 'Emotional Disclosure' intervention (ED); 12 sessions in which students were able to write about their anxieties but did not receive CBT input. Content in this condition was based upon an emotional writing condition by Reynolds et al. (2000).
- Control condition: Participants accessed the standard school curriculum.

Participants in the CBT and ED conditions accessed support on an indicated basis, with 3-5 participants in each group.

Results showed that participant symptomatology remained consistent across conditions between baseline and pre-intervention data points. Analysis of pre and post-intervention anxiety involved a series of 2x2 ANOVAs to assess whether specific treatment effects were evident for CBT versus ED and CBT/ED versus control conditions. These analyses indicated that the CBT condition produced significantly greater reductions in participant anxiety symptomatology, compared to ED and control conditions.

WoE 'A' was rated 'high' with all aspects of an RCT present. WoE 'B' was rated 'high', with a good range of measures used to assess intervention outcomes. Comparison between alternative and control conditions enhanced the possibility of attributing positive gains in the CBT condition to the intervention input. WoE 'C' was rated 'medium' in light of four key points. Firstly, the small sample used limits the external validity of these findings to other populations, which ties into the second point; the utilisation of a solely Dutch sample. Whilst these findings provide encouraging support for the use of indicated CBT support, their applicability to this review and a UK-based population is hampered by these shortcomings. Thirdly, not all of the participants used were of an age-range applicable to the target age range for this systematic review. The final limitation relates to the data obtained about the control group. Whilst pre-intervention comparisons of CBT and ED condition participants indicated these groups were comparable in terms of STAIC and RCADS scores, little information was obtained regarding the control group, and the extent of their comparability is therefore unknown. The overall weighting (WoE 'D') was rated 'high' in light of the encouraging indications for the use of CBT on an indicated basis.

**Study five:** Chiu, A.W., Langer, D.A., McLoed, B.D., Har, K., Drahota, A., Galla, B.M., Jacobs, J., Ifekwunigwe, M. and Wood, J.J. (2013). Effectiveness of Modular CBT for Child Anxiety in Elementary Schools. *School Psychology Quarterly*. 28 (2); pp.141–153.

These authors conducted an RCT investigation into the efficacy of indicated CBT-based support for addressing children and young people's anxiety. Forty participants were recruited from two United States elementary schools. Participants aged 5-12 years were recruited via a two-step process. Firstly, nominations for further support were provided by the school psychologists, school nurse or teaching staff. Secondly, a study of anxiety (in 'typically developing' children and young people) was underway at one school as part of routine practice. The authors used this medium to recruit further participants. Children and young people selected by school staff completed the MASC (see study three). Those with noticeably higher scores were made known to the school's psychologist who then nominated children and young people for additional support via the study.

Participants displaying initial signs of anxiety (but without diagnoses when the study commenced) were assigned to either a CBT experimental group (n=22) or a wait-list comparison group (n=18). Intervention sessions were delivered by 'clinicians', a term not operationalised clearly within the context of this study but which appears close in remit to a Clinical Psychologist within the UK.

Participant progress was monitored pre and post-intervention via diagnostic interviews completed by 'evaluators' blind to the purposes of the study. Interviews followed the structure of the Anxiety Disorders Interview Schedule for *DSM-IV*: Child and Parent Versions (ADISC/P; Silverman & Albano, 1996) and were held separately with participants and carers. These interviews allowed exploration and discussion of possible anxiety symptoms. Parent-report and pupil-report measures were also taken including:

- (i) The Multidimensional Anxiety Scale for Children (MASC; March, 1998) – child report, and;

- (ii) The Child Behavior Checklist (CBCL; Achenbach, 1991) – parent-report.  
Both measures were outlined in study three (Rice, 2008).

The intervention condition consisted of the 'Building Confidence' programme containing CBT-based input for children and young people and parent/caregiver training in supporting anxiety. 16 sixty-minute sessions were available to each child.

Participants in the CBT group experienced greater reductions in parent-reported and self-reported levels of anxiety. Independent evaluators measured participants' anxiety (raised during diagnostic interviews at pre and post-intervention) via the Clinical Global Impressions-Improvement scale (Guy, 1976). This measure highlighted that 95% of the CBT group made positive post-intervention improvements and were considered 'diagnosis-free', compared to 16.7% of wait-list participants. These findings provide preliminary support for the use of indicated CBT support in school settings. Findings would have been improved by a larger sample size, which would have aided the external validity of any conclusions drawn. Chiu et al (2013; 150) also identified the need to explore the replication of these findings if and when CBT support is provided by school staff with training in CBT-based interventions.

WoE 'A' is rated 'high', with all aspects of an RCT design apparent. WoE 'B' is rated 'high' with the authors implementing triangulation of data sources to ascertain whether anxiety reductions were apparent post-intervention, thereby strengthening the conclusions Chiu et al. made and aiding their ability to address their original hypotheses. WoE 'C' is rated 'high' in that the intervention study devised is of direct relevance to this systematic review, providing initial indications that CBT may be implemented in schools on a small-group basis. Whilst a 'high' rating is given, this could have been strengthened further by the recruitment of a sample of participants of an age of greater relevance to the purposes of this review (only some were in line with the age range expected i.e. 11 years plus).



**Study six:** Miller, L.D., Laye-Gindhu, A., Liu, Y., March, J.S., Thordarson, D.S. and Garland, E.J. (2011a). Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials. **Behaviour Research and Therapy**. 49 (5); pp.315-323.

The authors hypothesised 'that the intervention group would report a greater decrease in anxiety symptoms at post-intervention than the attention-control group, and that anxiety levels would be maintained or continue to reduce in small magnitude over time' (ibid; 316).

The measures utilised were as follows:

- (i) The MASC (Multidimensional Anxiety Scale for Children, March; 1997) was used to evaluate participants' anxiety symptomatology.
- (ii) Parents/caregivers and teachers completed the BASC (Behavioural Assessment System for Children, Reynolds and Kamphaus, 1992) to report upon anxious behaviours demonstrated across the home and school contexts.

The FRIENDS intervention was delivered on a small-group basis with participants from 17 Canadian schools (191 participants, mean age 10.1yrs). Performance in the CBT condition was compared with an attention-control group which provided peers with additional adult support via a reading club, but without therapeutic input.

Measures were taken at pre-intervention, post-intervention and at a one-year follow-up. However, the attention-control group had received the intervention input by the time the follow-up measure was taken; meaning control group comparisons were not possible at that stage.

Contrary to the experimental hypotheses, results demonstrated no intervention effects, indicating that participants in the CBT condition made no extra progress, compared to peers in the attention-control group. The use of a control group in the strictest sense may have been beneficial here and results may suggest that adult attention alone may provide sufficient support for young people experiencing worries. Miller et al. cited studies which

supported this reflection (Deni, 2001; Jensen, Weersing, Hoagwood, & Goldman, 2005).

WoE 'A' is rated 'high' owing to a well implemented RCT design. WoE 'B' is rated 'high' given the use of an attention-control group and random allocation of schools to experimental/control conditions. This rating could have been strengthened further had a long-term follow-up control group been included in data collection. WoE 'C' was rated 'high' with the large scale sample used increasing the generalisability of these findings and their relevance to the current review. The use of school-based staff for implementation of CBT sessions also contributes to the 'high' rating, as this systematic review is interested in the use of school staff for CBT implementation. There are however a number of limitations worth noting. Firstly, the lack of a UK-based sample limits the external validity of these findings, despite the benefits of the large-scale sample, and therefore further investigation with a UK-based population is desirable. Secondly, the BASC is a detailed measure and may have been difficult for teachers and parents alike to complete. Time pressures on both parents and teachers and the possibility of limited parental ability to access written questionnaires may partly explain the limited response rate from these parties. Given the low response rate, parental and teacher data were not analysed, thereby adding another limitation as pupil-report data was the only source of data available for evaluation of this CBT intervention study. Finally, only some participants were within an age range deemed relevant to that required by the current systematic review.

Whilst Miller et al.'s findings do not provide support for the use of indicated CBT support in school, an overall weighting (WoE 'D') is rated 'high' given the points discussed.

**Study seven:** Bernstein, G.A., Layne, A.E., Egan, E.A. and Tennison, D.M. (2005). School-Based Interventions for Anxious Children. **Journal of the American Academy of Child & Adolescent Psychiatry**. 44(11); pp.1118-1127.

Bernstein et al implemented an RCT investigation of the FRIENDS CBT programme (Barrett et al., 2000), designed to:

- Examine the use of indicated CBT support in a school setting in the United States.
- Explore the possible benefits of incorporating a parental training component to child-orientated CBT support.

The authors hypothesised that:

- The active intervention groups would produce significantly greater reductions in children and young people's anxieties, when compared to the control condition.
- The CBT plus parent training condition would produce significantly greater reductions in pupil anxiety than the condition receiving CBT for children and young people alone.

Parental consent was sought from 1,037 second to fifth grade students, with a response rate of 78% (n=809) and 61% of parents (n = 497) agreeing for their children to be considered for study participation. Participants were identified via a screening measure (MASC; March et al., 1997). Family perspectives were also obtained via interviews based upon the Anxiety Disorders Interview Schedule (ADIS) for DSM-IV (Silverman and Albano, 1996). 61 participants (7-11 years) were included in the final sample.

Participants were randomly allocated to one of three conditions; CBT support, CBT support with parent training or a no-intervention control condition. Each group contained 8-10 participants. The CBT plus parent training group involved parents receiving sessions on a separate but simultaneous basis to their children. Each intervention group received 9 weekly CBT sessions of 60 minutes duration.

In addition to the MASC and ADIS, the following measures were also used:

- (i) Screen for Child Anxiety Related Emotional Disorders (SCARED, Birmaher et al., 1999); delivered on either a pupil-report or parent-report basis. Parent-report responses were used in this study.
- (ii) Clinical Global Impressions (CGI). The Global Improvement scale of the CGI (Guy, 1976) was used as a means for ascertaining pupil progress (in

terms of diagnostic symptomatology) based on information derived from the ADIS-structured interviews.

Comparisons of pre/post-intervention data indicated that participants meeting diagnostic criteria for anxiety disorders reduced from 82% (pre-intervention) to 29% (post-intervention) for the CBT-only participants. Participants in the CBT plus parent training demonstrated a reduction from 80% (pre-intervention) to 33% (post-intervention). Participants in the control condition ranged from 67% (pre-intervention) to 46% (post-intervention). Chi-square analyses indicated that significantly more participants from the combined CBT groups moved to non-diagnostic status post-intervention compared to control group participants. Furthermore, significantly more young people moved to non-diagnostic status in the CBT-only condition than in the control condition. However, contrary to the initial hypotheses, there were no significant differences between CBT plus parenting condition participants and control participants following similar comparisons. On the basis of this data alone, CBT-only could be perceived to be more efficacious than CBT plus parental training for reducing participants' anxiety. However, other measures (i.e. CGI and parent-report MASC scores), indicate that CBT plus parental training participants showed considerably more progress than control participants, whilst the same could not be said for CBT-alone participants when compared to the no-treatment control condition.

WoE 'A' was rated 'high' with a well-structured RCT study implemented. WoE 'B' was rated 'high' with the range of intergroup comparisons and multiple data sources enabling detailed consideration of each of the experimental hypotheses. WoE 'C' was rated 'medium' as despite these findings supporting the use of indicated CBT interventions within schools, there are two key points: a) only some of the participants are of an age directly relevant to the purposes of this review, and b) the homogenous nature of this American sample limits the external validity of findings to other populations. As such, further research into whether other sample populations would demonstrate similar intervention effects is warranted. WoE 'D' is rated 'high'.

**Study eight:** Rodgers, A. and Dunsmuir, S. (2013), A controlled evaluation of the 'FRIENDS for Life' emotional resiliency programme on overall anxiety levels, anxiety subtype levels and school adjustment. **Child and Adolescent Mental Health.**

This RCT study investigated the efficacy of the 'FRIENDS for Life' intervention for increasing school adjustment, reducing those symptoms associated with several anxiety subtypes and reducing overall anxiety levels.

Participants (first year students,  $n = 62$ , 19 males, 12-13 years) were randomly allocated to intervention or wait-list comparison conditions across three secondary schools in a socially disadvantaged area of Ireland.

Student anxiety levels were measured using student-report (Spence Children's Anxiety Scale, SCAS; Spence, 1997) and parent-report questionnaires (Spence Children's Anxiety Scales for Parents, SCAS-P; Spence, 1997) which correspond to six DSM-IV anxiety categories; Generalised Anxiety, Social Phobia, Separation Anxiety, Obsessive Compulsive Disorder, Panic/Agoraphobia and Physical Injury Fears. School adjustment was assessed via student-report (The Child Rating Scale, CRS; Perkins and Hightower, 2002) and teacher-report measures (Teacher-Child Rating Scale, T-CRS 2.1; Perkins and Hightower, 2002).

The intervention consisted of 10 weekly 60 minute sessions, delivered by the lead author and included group work, workbook exercises, games and role plays designed to provide psychoeducation and introduce participants to CBT-based skills; wait-list control condition participants received no intervention during this time. All measures were completed with participants from both conditions prior to and immediately after the initial intervention condition; teacher and student measures were also repeated at four-month follow-up.

A mixed design ANOVA assessed group progress (intervention versus wait-list) across three data points (pre-intervention, post-intervention and follow-up). Results demonstrated a significant effect of time ( $F(2,120) = 15.94$ ,  $p < .001$ ) illustrating that anxiety scores changed over time. An interaction effect was found (group and time, ( $F(2, 120) = 3.33$ ,  $p < .05$ ) suggesting that

intervention condition participants demonstrated significantly greater reductions in anxiety scores post-intervention, compared to control group participants. Intervention participants also recorded significant reductions in anxiety levels between post-intervention and follow-up ( $t(31) = 4.985, p < .01$ ), unlike control participants ( $t(29) = 1.885, p = .07$ ). Parent measures indicated that parents of intervention participants reported significantly reduced levels of student anxiety post-intervention ( $t(29) = 2.02, p < .05$ ) whilst control condition parents did not ( $t(26) = -.658, p = .517$ ). A significant group-by-time interaction was found for the 'Separation Anxiety' subtype only, with intervention participants recording significantly greater reductions in separation anxiety post-intervention, compared to control condition participants ( $F(2,106) = 3.086; p = .05$ ). No significant interaction effects were found for school adjustment (i.e. group versus time) on either student-report or teacher-report measures.

WoE 'A' is rated 'high' with the necessary features of an RCT exemplified. WoE 'B' is rated 'high' owing to the multi-informant approach over several data points. The use of a wait-list control condition further increases the reliability of the conclusions drawn. WoE 'C' is rated 'high'; this study is similar in design to the current study, participants are of an equivalent age and a wait-list control condition is utilised. Results suggest encouraging outcomes for CBT when delivered within a universal format, with a focus on higher-level anxieties. WoE 'D' is rated 'high'.

## **2.9.7 Findings**

For a detailed overview of key information derived from each study, see appendix 3. The following sections will highlight several pertinent reflections.

### **2.9.7.1 Intervention programmes**

Across the eight studies six different intervention programmes were used with the 'Coping Koala' (Heard, Dadds and Rapee, 1991) and the FRIENDS (Barrett, Lowry-Webster and Holmes, 1998) programmes most commonly implemented, both being used in two studies.

### **2.9.7.2      *Intervention programme durations***

The total number of sessions varied per study, with the minimum number of sessions recorded as 9 (Bernstein et al., 2005) and the maximum number of sessions recorded as 16 (Rice, 2008; Chiu et al., 2013). Sessions were delivered once a week in all but one study, where sessions were delivered twice a week (Karimi and Venkatesan, 2009). Individual session durations ranged from 30 minutes (Muris et al., 2009) to 90 minutes (Karimi and Venkatesan, 2009).

### **2.9.7.3      *Study designs***

The majority of studies (n = 6, 75%) employed a Randomised Control Trial (RCT) design. Alternative designs included a quasi-experiment comparing the intervention condition with placebo and control conditions (Rice, 2008) and a one-group pre-test/post-test quasi-experimental design (Muris et al., 2009). Weight of evidence ratings regarding methodological quality (see table 2) indicate that the quality of design methodology was high across all 8 studies included within the systematic literature review.

### **2.9.7.4      *Control groups***

Control group conditions were implemented in 7 studies (87.5%) enabling comparisons between CBT intervention support and no-treatment conditions. 2 studies (25%) also implemented either placebo or 'alternative' treatment conditions devoid of therapeutic input, in an attempt to ascertain whether CBT support produced a higher level of positive outcomes for young people, when compared with 'adult attention' and control conditions. CBT was shown to produce significantly greater reductions in pupil anxiety in both studies of this nature (Muris et al., 2002; Rice, 2008).

### **2.9.7.5      *Age range of participants***

A common shortcoming of those studies outlined in section 2.9.6 relates to the age range of participants. Only some of these participants are within the age range required by the systematic review, a limitation applicable to 6

(75%) studies (Muris et al., 2009; Rice, 2008; Muris et al., 2002; Chiu et al., 2013; Miller et al., 2011; Bernstein et al., 2005). 472 participants were included in the 8 studies listed in the systematic literature review with a minimum participant age of 5 years (Chiu et al., 2013) and a maximum age of 18 years (Rice, 2008).

#### **2.9.7.6      *Intervention leaders***

A range of intervention leaders were utilised across the 8 studies, including qualified CBT therapists, psychology graduates postgraduate students. Trained teaching staff were only utilised in one study (Miller et al, 2011); indicating that the efficacy of teacher-delivered CBT support for producing positive outcomes will require further investigation.

#### **2.9.7.7      *Outcomes measured***

Given the specific focus of this systematic literature review, all studies sought primarily to investigate the efficacy of small-group CBT support in producing reductions in the anxiety symptoms experienced by participants. Additional observations included:

Karimi and Venkatesan (2009) sought to reduce anxiety in relation to one very specific area of performance anxiety; mathematics anxiety. In particular, their study highlighted reductions in participants' levels of 'Maths test domain' anxiety and 'numerical domain' anxiety suggesting that experimental group participants felt less anxious with regards to examinations or handling numerical data after CBT support.

A number of studies (Chiu et al., 2013; Miller et al., 2011; Bernstein et al., 2005; Rodgers and Dunsmuir, 2013) implemented a multi-informant approach to intervention evaluation. Those measures used underline that the positive outcomes derived from CBT support are not limited to the reduction of children and young people's anxiety symptoms alone; CBT may also alter the perceptions of a young person's anxieties held by those key parties who regularly support them. Two studies (Bernstein et al., 2005; Chiu



et al., 2013) (25%) assessed participants' anxiety in line with diagnostic criteria for anxiety disorders, evaluating the number of participants meeting diagnostic criteria pre and post-intervention. Significant reductions in the number of participants meeting diagnostic criteria thresholds were evident in both studies, following CBT support.

#### **2.9.7.8      *Conclusions***

It may be concluded from this review that the studies included provide an encouraging evidence base for delivering CBT intervention support via an indicated format, when seeking to address anxiety in children and young people. These conclusions are tentatively drawn however, given the limited numbers of studies obtained during the literature search, which may suggest that minimal research has been carried out within the boundaries of the inclusion criteria specified in section 2.9.3. This point will now be discussed in further detail.

Firstly, whilst the studies selected included participant populations from various nations, none were conducted within the United Kingdom. The promising results presented by these studies may therefore have limited external validity and generalisability to UK samples.

Secondly, whilst a range of participant ages were apparent throughout these indicated intervention studies, only a small proportion were considered to be of secondary school-age, indicating that further research may be required with adolescents experiencing anxiety.

Thirdly, only one study included school staff as CBT intervention leaders (i.e. teachers and not teaching assistants). This is of particular importance given the views of Rait et al. (2010), outlined in section 2.4, which suggest the need for the active engagement of key stakeholders (e.g. teachers, teaching assistants and parents) in both the identification of anxiety needs and the implementation of appropriate support. A small number of Australian studies have demonstrated teaching staff's ability to deliver CBT interventions following training (Barrett and Turner, 2001; Lowry-Webster et al., 2001),

albeit these interventions were delivered on a universal basis and by qualified teachers. Further research into the efficacy of indicated CBT support delivered by teaching assistants and support staff is therefore required.

Fourthly, linked to section 2.8, only one study explored change mechanisms relating to positive CBT outcomes; Muris et al (2009) investigated the role of negative automatic thoughts and participants' coping self-efficacy in mediating positive CBT outcomes, providing initial support for the contribution of both of these factors. Furthermore, Muris et al utilised quantitative methods, as opposed to undertaking qualitative exploration of stakeholders' perspectives regarding potentially efficacious CBT mechanisms. Therefore within the parameters of this review, no qualitative studies of potential mechanisms of change were identified, and none of those studies aiming to understand the effects of interventions incorporated qualitative methods within their respective designs.

In summary, this systematic literature review tentatively suggests that indicative CBT support for young people experiencing anxiety can be effective when implemented in a school setting. There is an intuitive appeal regarding the delivery of intervention support in educational contexts, as those factors which trigger and/or maintain children and young people's anxiety may be present in these contexts.

The following section introduces the current study and the intended contributions of this study to the existing evidence base for the use of Cognitive Behavioural Therapy with school pupils.

## **2.10 Rationale for the current study**

Current Government legislation and policies outlined in section 2.3.1 (Department of Health, 2011; 5) underline the need to continually develop the evidence base for supporting the emotional health and mental well-being of children and young people. The findings of the systematic literature review highlight that minimal research has been undertaken into the use of indicated CBT support with UK-based school students. Indicated programmes target

those students who report moderate to higher symptoms of anxiety without necessarily meeting diagnostic criteria for anxiety disorders and associated support. As Rapee (2012) suggests, it is presumed that such students may be at increased risk of developing anxiety disorders, placing an emphasis on the need for preventative intervention.

Further investigation is also needed to explore whether indicated CBT support can produce positive outcomes for children and young people who may begin to demonstrate anxieties for the first time during later childhood and early adolescence. This latter point is of particular relevance to the Local Authority within which the current study is based, as reports suggest that many secondary-school age students experience notable anxiety for the first time following their transitions to key stages three or four, due to a range of social and academic reasons. Section 2.8 also emphasises the need for further investigation of those mechanisms underpinning the efficacy of indicated CBT programmes, in this sense, this study may offer evidence around the mechanisms of change involved in preventative CBT support.

The topics for investigation, therefore, were as follows:

- (i) Can indicated CBT interventions reduce anxiety in UK-based school students?
- (ii) Specifically, can this approach address anxiety in secondary age students (i.e. aged 11 years and older)?
- (iii) Can this approach alter parental perceptions of participants' anxiety?
- (iv) How efficacious is indicated CBT support when implemented by teaching assistants trained in the use of CBT-based principles?
- (v) What do students perceive to be the most efficacious 'mechanisms of change' associated with CBT-based interventions?

Section 2.11 outlines the research questions developed for this study.

## **2.11 Research questions**

The overall title of the current study is:

***“An investigation into the impact of an indicated CBT-based intervention on anxiety in secondary school students”.***

This primary research title is sub-divided into two main research questions which are:

- 1. Does secondary school-age students’ self-reported anxiety reduce as a result of participating in an indicated CBT intervention programme?**
- 2. Do parents perceive student anxiety to reduce following secondary school students’ participation in an indicated CBT intervention programme?**

In addition, students’ perceptions of a) the intervention programme as a whole, and b) any potentially efficacious ‘mechanisms of change’ underpinning CBT-based support will be explored via the use of a focus group approach, under the following research title:

***“An exploration of participants’ perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention’s contribution to this”.***

These research questions also contribute towards the experimental hypotheses used within this study. These hypotheses are detailed in section 3.7.1.

# Methodology

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## **3. Methodology**

### **3.1 Introduction**

Chapter two provided a review of literature relevant to the current research study. Chapter three details the research methodology and investigative methods employed in order to address those research questions outlined in section 2.11.

First, in order to locate the study its epistemological standpoint is considered, with particular reference to post-positivist, constructivist and pragmatic paradigms. Next, the research method is described in greater detail so as to illustrate the procedure followed in order to implement the current study within an applied educational context. Details are provided regarding participants, the measures used and the intervention programme implemented. Finally, the ethical considerations relevant to anxiety intervention research are discussed and the actions taken to ensure ethically sound research practice are detailed.

## **3.2 Epistemological considerations**

Applied research has been broadly defined as attempting to “understand, describe, predict or control an educational or psychological phenomenon or to empower individuals in such contexts” (Mertens, 2005; 2).

Decisions regarding the focus of a piece of research, the phenomena it may investigate and the means through which investigation takes place are all preceded by consideration to the theoretical frameworks and paradigms to which a researcher may subscribe. Many of these paradigms are notably contrasting and the paradigm adhered to has distinct implications for the way in which the researcher construes and interprets information and data. Adherence to a given paradigm subsequently guides researchers’ decisions regarding methodological procedures and design. The following sections (3.2.1 to 3.2.3) detail epistemological considerations relevant to the current study.

In what has become known as the ‘paradigm wars’ (Gage, 1989), researchers have historically favoured either positivist (and more recently post-positivist) or constructivist research paradigms. The features of these paradigms will now be discussed, as a precursor to explaining the paradigm adhered to within this research.

### **3.2.1 Positivism and Post-Positivism**

Often referred to as ‘scientific method’ (Mackenzie and Knipe, 2006; 195), Positivism: “reflects a deterministic philosophy in which causes probably determine effects or outcomes” (Creswell, 2003; 7) and is interested in the observation and examination of natural phenomena through empirical approaches (Beck, 1979). Advocates of Positivism prioritise the testing of theories or hypotheses and positivist research is often therefore associated with quantitative data (Mackenzie and Knipe, 2006; 195).

Post-positivism also prioritises a scientific approach, using detailed hypotheses and quantitative methods to explore general laws regarding the social world. However, post-positivism rejected the notion that all that could

be studied was limited to that which could be observed, instead suggesting that research should consider the notion of probability rather than certainty, as much of the human experience is important but may not be readily observable (e.g. emotions/cognitions) (Mertens, 2005). Post-positivist research also prioritises quantitative data collection and analysis, whilst acknowledging that “what might be the truth for one person or cultural group may not be the “truth” for another” (O’Leary, 2004). This study had initially adopted a post-positivist epistemological stance with elements of a positivist agenda (Robson, 2011; 22). For reasons detailed later in the chapter, a change in epistemology of the study was required. In order to explain this alteration, a constructivist paradigm must first be considered.

### **3.2.2 Constructivism**

Advocates of Constructivism may argue that positivist approaches are less capable of studying the complexity of social phenomena and human behaviour; an issue often apparent in school-based research, whereby the complexity of social experiences, human interactions, teacher-student dynamics and the multitude of extraneous variables within the school context present the positivistic researcher with many challenges in their development of truly controlled investigations (Cohen, Manion and Morrison, 2011). In contrast to positivistic research, constructivist research places less emphasis on investigating scientific hypotheses or causal effects. Instead, the focus is on generating theory and meaning from data based on the accounts of participants (Creswell, 2008). Advocates of this paradigm suggest that reality is socially constructed (Mertens, 2005; 12), often opting to use qualitative methods of data collection and analysis as a result (Willig, 2013).

### **3.2.3 Pragmatism**

It has been suggested that the tendency for researchers to pledge allegiance to either qualitative or quantitative paradigms will subsequently direct a researcher’s efforts and may result in the dismissal of other paradigms (Kuhn, 1962). Kuhn argues that strict adherence to one paradigm may restrict the creativity and curiosity of researchers (Kuhn, 1962), limiting the

potential of research to explore the social phenomena of interest via a range of alternative, applicable methods. Similarly, Ercikan and Roth (2006) and Gorard and Smith (2006) argue against prioritising positivist or constructivist paradigms, stating that there is instead compatibility between the two frameworks.

In contrast to the paradigm wars, pragmatism prioritises the investigation of the 'research problem' in order to avoid such issues. Pragmatism involves applying a range of approaches in order to comprehensively explore the problem (Creswell, 2003; 11), suggesting that there is a compatibility between quantitative and qualitative frameworks. The research question dictates which data collection and analysis procedures are chosen, with those methods deemed most apt for exploring the research question selected. Subsequently, pragmatism is considered to be the philosophical framework relevant to a mixed methods approach to research (Tashakkori and Teddlie, 2003).

### **3.3 Research Methodology**

Sections 3.3.1, 3.3.2 and 3.3.3 will now explain quantitative, qualitative and mixed methods approaches in greater detail, as a precursor to introducing the design of the current study.

#### **3.3.1 Quantitative/Fixed Designs**

Fixed designs are positivist in orientation and usually involve the collection of quantitative data, giving priority to experimentally orientated investigations such as randomised control trials (RCTs) and quasi-experiments. Fixed designs are theory-driven (Robson, 2011; 82) and typically consider statistical aggregates, general tendencies, and correlations. Statistically significant patterns then form the basis of the conclusions drawn.



### **3.3.1.1      *Randomised Control Trials (RCTs)***

RCTs are commonplace within interventionist studies and typically involve the introduction of one or more interventions/experimental variables to a research context, with data taken on a range of outcomes under controlled conditions (Cohen, Manion and Morrison, 2001). RCTs involve randomised allocation of participants to either experimental or control group conditions, with a view to ascertaining the extent of intervention effects.

Control or comparison groups provide a means of controlling for extraneous, confounding variables and strengthen the confidence with which conclusions may be drawn about the efficacy of the treatment provided within the experimental condition (Cohen, Manion and Morrison, 2001). Experimental designs can be advantageous in that they are often concerned with establishing possible causation, which may be of importance when evaluating educational initiatives and interventions (Slavin, 2002), as with the current study.

Undertaking experimental designs also prompts consideration of the reliability (consistency), validity (accuracy) and the generalisability (i.e. to other populations) of the findings obtained (Robson, 2011). RCTs are considered to provide high levels of reliability, validity and generalisability of findings when implemented in a rigorous manner. However, implementing RCTs within applied educational settings can prove difficult; as the real world nature of the educational context may make random allocation to experimental conditions impracticable and may prevent the control and manipulation of independent variables (Shadish, Cook and Campbell, 2001). As such, it may be necessary to consider alternative designs. Quasi-experiments are an experimental alternative to RCTs.

### **3.3.1.2      *Quasi-experiments***

Quasi-experiments offer a field-based alternative to RCTs where randomisation cannot occur or is impractical (as within school contexts) but where an experimental design (and control over experimental variables) is

required (Mark, 2010). Cohen et al (2011; 322) note that random allocation, whilst preferable, can be difficult to achieve in educational research, owing to a range of factors that can be difficult to control within naturalistic settings. As such, Cohen et al argue that quasi-experiments may be better suited to field-based research. Quasi-experiments may also incorporate control or wait-list comparison conditions (in order to control for confounding variables) within a pre-test/post-test two group design.

It has been argued that quasi-experiments are at greater risk of threats to reliability and internal and external validity and that due consideration must be given to means of addressing such threats (Shadish, Cook and Campbell, 2001). Threats to the internal validity of the research (e.g. 'fidelity of intervention' and 'diffusion or treatments') are greater within field-based research (Shadish, Cook and Campbell, 2001) and may provide the researcher with enumerate alternative explanations to the observed effects. For an explanation of these concepts and their relevance to the current study, see section 3.16.

### **3.3.2 Qualitative/Flexible Designs**

In contrast to fixed approaches, flexible designs are constructivist in nature; they do not start from specific hypotheses and they are less concerned with causal relationships or the rigorous comparison of variables. Instead, qualitative designs start with a 'problem' that the researcher wishes to explore. Next, holistic data collection methods and inductive logic are used, with a view to developing 'theories' and shared understandings regarding social phenomena (Mertens, 2010).

### **3.3.3 Mixed Methods**

Mixed methods research may be defined as "the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research"

(Creswell, Plano Clark, Gutmann and Hanson, 2003; 212). Mixed methods designs may be implemented when researchers are keen to address both evaluative, positivistic questions and constructivist, exploratory questions within the same study (Teddlie and Tashakkori, 2009; 26). Such designs typically involve:

- Quantitative and qualitative methods within the same research project;
- An explicit account of the ways in which these elements relate to one another;
- Pragmatism as the underpinning paradigm for the research (Denscombe, 2008).

Undertaking mixed methods research negates restrictions imposed by adherence to one paradigm or associated methodological procedures (Mackenzie and Knipe, 2006; 199), thereby facilitating a greater level of detail to a research project, providing supplementary data in order to strengthen conclusions and explore social phenomena in a holistic manner.

A summary of the key features of the paradigms and associated research methods, discussed in sections 3.3.1-3.3.3 is provided in appendix 4. The following section outlines the research paradigm chosen for the present study.

### **3.4 The research paradigm for the current study**

This study combines both quantitative and qualitative approaches in a mixed methods study design, therefore adhering to the pragmatism paradigm, within which the research question(s) are perceived as being of primary importance (Hanson et al., 2005; 52) and the research methods chosen are considered to be the most appropriate for providing insight into their respective research questions. The research design for the current study will now be outlined.

### **3.5 The research design for the current study**

The aim of the following sections is to clearly outline the study design as a whole, in order to a) enable the reader to draw conclusions about the treatment integrity and efficacy of the intervention (Lane et al., 2004) and b) enable replication of the intervention and/or research design (Flay et al., 2005); “An adequate description of a program or policy includes a clear statement of the population for which it is intended; the theoretical basis or a logic model describing the expected causal mechanisms by which the intervention should work; and a detailed description of its content and organization, its duration, the amount of training required, intervention procedures, etc. The level of detail needs to be sufficient so that others would be able to replicate the program or policy” (Flay et al., 2005; 154).

This study utilised an explanatory sequential mixed methods research design (Creswell, 2003; 71). Within an explanatory sequential design, the following factors are evident:

- There are two independent phases, starting with the quantitative phase and followed by qualitative data collection;
- The two phases are integrated at the data interpretation and discussion stage (Hanson et al. 2005; 229);
- Priority is given to the quantitative phase with the researcher utilising qualitative data to reflect upon the quantitative trends and explore possible mechanisms underpinning these trends (Creswell, 2003; 82).

Advocates of mixed methods research argue that clarity must be provided regarding the means for utilising a mixed methods design (Creswell, 2003; 61). The following reasons are provided for its use in this study:

- Qualitative approaches are included as a means of providing elaboration, enhancement, illustration and clarification of the results obtained from those quantitative methods employed (Green, Caracelli and Graham, 1989);

- Completeness: the combination of qualitative and quantitative approaches should provide a more comprehensive account of the area of inquiry (Bryman, 2006);
- Utility: it has been suggested that by combining approaches from quantitative and qualitative paradigms, the resultant data will provide a fuller picture of the phenomena of interest and will therefore be of greater use to practitioners in the field (Bryman, 2006; Gulliford, 2015, in press).

This study represents an 'emergent' mixed methods design (Creswell, 2003; 54) whereby the use of mixed methods arises due to issues that develop during the process of conducting the research (Creswell, 2003; 54). The introduction of a second phase represents a move away from a solely post-positivist approach to one which also included exploratory goals. The reasons for the introduction of this phase included:

- To address the need for further exploration of potentially efficacious elements of the CBT model.
- To meet the needs of the stakeholders. That is, the LA and EPS wish to run such programmes again in future and post-intervention feedback from participants will assist with the implementation of future programmes.
- The response rate for intervention participation during Phase One of the study was lower than anticipated (section 3.11) with possible implications for the external validity of those findings obtained (see section 5.4.1.3).

The current use of mixed methods provided qualitative inquiry to quantitative evaluation. As Palinkas et al. (2011) state, qualitative enquiry:

- i. Explores participants' experiences of their participation in evidence-based intervention processes, capturing their perceptions in their own words so that the intervention may be refined accordingly.
- ii. Obtains qualitative insight into the intervention procedure which may not be captured via standardised rating scales.
- iii. Compensates for limitations within the quantitative phase. In the current study, convergence of quantitative and qualitative data was

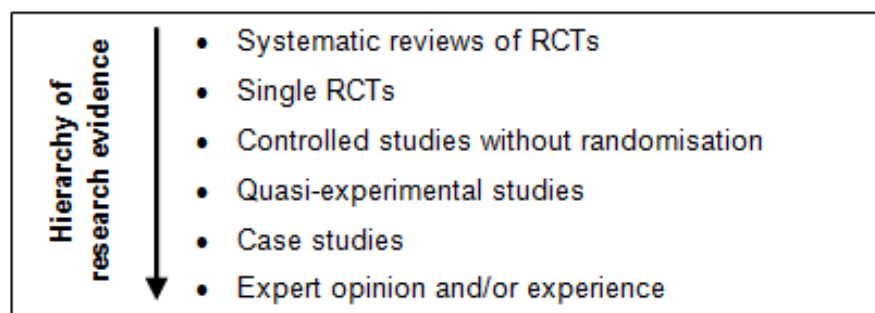
undertaken due to limited statistical power in the Phase One quantitative analyses.

### 3.6 Evidence-based practice

EPs are considered to be scientist-practitioners (Frederickson and Cline, 2009; Frederickson, Miller and Cline, 2008; APA, 2006) through their combination of professional practitioner and applied researcher skills. As scientist-practitioners, EPs make valuable contributions through:

- i. Ensuring professional practice is informed by relevant research and established evidence (Gulliford, 2015, in press);
- ii. Contributing to research knowledge through professional practice (Lindsay, 1998), and;
- iii. Investigating the efficacy of intervention approaches, through consideration of “what works with whom, under what conditions and with what effects” (Hargreaves, 1997; 414).

Point (iii) in particular requires further consideration, in that evidence-based practice had originated with positivist analyses of causal relationships and treatment efficacy (Shadish, Cook and Campbell, 2002; APA, 2006), resulting in psychological research in education initially prioritising exploration of intervention effects (Gulliford, 2015, in press). The ‘hierarchy of evidence’ (Figure 3.1) illustrates the weighting given to certain positivist designs:



**Figure 3.1 – A figure to show the traditional hierarchy of evidence (adapted from Fox, 2003 and Ramey and Grubb, 2009).**

However, positivist approaches have received criticism for being reductionist in nature, with the possibility for reporting complex research contexts in terms of quantifiable effects (Ryan, 2006) and “in adopting a ‘what works’ paradigm there may be a focus on *outcomes* at the expense of insights into the *mechanisms* involved in the *processes of change*” (Gulliford, 2015; 4, in press). This acknowledges the importance of qualitative data for elaborating upon quantitative data and the need for explorative research approaches to provide crucial insight regarding the optimum means of embedding an intervention within its intended context (ibid; 5). The emergent sequential mixed methods design used in the current study therefore represents one effort to address questions of efficacy and utility through combining measurement of the outcomes of an indicated CBT-based intervention with exploration of participants’ perspectives of experiencing intervention support, as advocated by Miller and Todd (2002).

The following sections will now detail the specific methodologies used within the Phases One and Two.

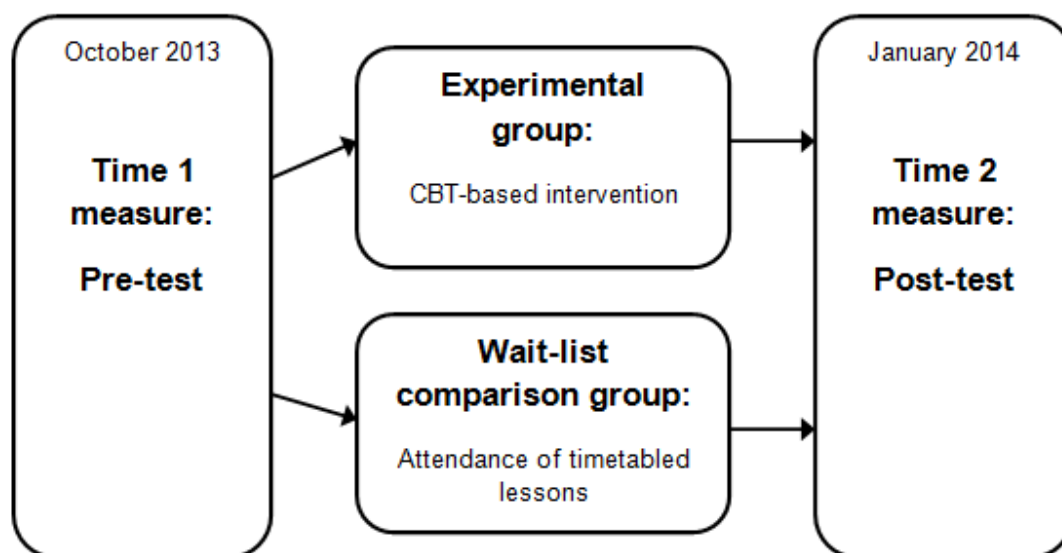
### **3.7 Phase One – the quantitative aspect of the current study**

Phase One of the current study constitutes a quasi-experimental evaluation of an indicated (i.e. preventative, small group) CBT-based intervention (see section 2.5.2), with the exploration of hypotheses (section 3.7.1) and possible interactions between Independent Variables (IV) and Dependent Variables (DV) (section 3.7.2), as with RCTs.

A pre-test post-test quasi-experimental design was used to evaluate the efficacy of a CBT-based intervention during Phase One of the current study. Following pre-intervention student-report screening measures (Time 1), students were allocated to ‘experimental’ or ‘wait-list comparison’ conditions via a matched pairs design, in order to optimise comparability of the two conditions (for further information see section 3.10.3.2; ‘Study sample’). Parent-report measures were also completed for those students in both conditions. The experimental group then attended the CBT-based

intervention for six weeks whilst the wait-list comparison group attended their usual timetabled lessons.

Post-intervention measures were then taken from students and parents in both conditions (Time 2). This design is illustrated in Figure 3.2.



**Figure 3.2 – An illustration of pre-test/post-test quasi-experimental design used within Phase One of the current study**

This design enabled the comparison of between-groups and within-groups progress over the course of the intervention period.

The author adopted an external role to the intervention, details of which are provided in section 3.10. It was intended that the researcher would ‘participate’ as minimally as possible, in order to avoid any ‘experimenter effects’ (Robson, 2011; 84), further details of which are provided in section 3.16.1.3. Phase One thereby incorporates elements of a post-positivist perspective.



### 3.7.1 Phase One Hypotheses

Table 3.1 outlines the research questions, experimental and null hypotheses relating to Phase One.

Research question	Experimental hypothesis	Null hypotheses
<b>1. Does secondary school-age students' self-reported anxiety reduce as a result of participating in an indicated CBT intervention programme?</b>	Participants in the CBT-based intervention condition will report significantly reduced anxiety between pre-test and post-test measures. These changes will not be observed in participants in the wait-list comparison group.	There will be no statistically significant difference between the self-reported anxieties of those participants in the experimental condition and those participants in the wait-list comparison condition between pre-test and post-test measures.
<b>2. Do parents perceive student anxiety to reduce following secondary school students' participation in an indicated CBT intervention programme?</b>	Parents of participants in the CBT-based intervention condition will report significant reductions in student anxiety between pre-test and post-test measures. These changes will not be observed in parents of participants in the wait-list comparison group.	There will be no statistically significant difference between parental perceptions of student anxiety reported by parents of participants in the experimental condition and parents of participants in the wait-list comparison condition, between pre-test and post-test measures.

**Table 3.1 - A table outlining the experimental and null hypotheses for Phase One of the current study**

### **3.7.2 Phase One Independent Variables**

Phase One was considered to be a ‘mixed design’ as there were two independent variables; a between-groups variable and a within-groups variable.

The ‘between-groups’ independent variable (i.e. treatment exposure) had two levels:

- i. Participation in the CBT-based intervention, or;
- ii. Attendance of timetabled lessons (wait-list comparison)

The ‘within-groups’ independent variable (i.e. time) also had two levels:

- i. Pre-test (Time 1), and;
- ii. Post-test (Time 2).

### **3.7.3 Phase One Dependent Variables**

The dependent variables in the current study were students’ self-reported anxiety (for research question one) and parent-reported perceptions of students’ anxiety (for research question two).

### **3.7.4 Phase One data analysis procedures**

Data relating to Research Questions One and Two was analysed using both descriptive and inferential statistics, detailed in full in section 4.2.1. Two-way mixed ANOVAs were used for both data sets, as both research questions followed a mixed design, incorporating between-groups and within-groups variables.

## **3.8 Phase Two – the qualitative aspect of the current study**

Phase Two constituted a focus group approach undertaken with intervention participants. This aspect of the study was designed to provide a qualitative exploration of the features and experience of the intervention as perceived by participants. Sections 3.8.1– 3.8.2 will now consider means of focus group

implementation for Phase Two. Specific details regarding the implementation of Phase Two are provided in section 4.3.

### **3.8.1 Focus Groups**

Focus groups are a form of group interview, often including between five and twelve participants. They facilitate detailed, reciprocal discussion between participants, regarding a topic of interest selected by the researcher (de Ruyter, 1996; 44), enabling the collective perspective of a number of participants regarding a social experience to be captured. It is from this interaction that experiential data emerges (Willig, 2013). The researcher-led nature of these discussions is considered to be both a positive and a negative; whilst they may entail manufactured social interactions within an unnatural setting, they also enable efficient data collection regarding the phenomenon of interest, capturing insights that may otherwise have not been readily available from participants, had other approaches been implemented. Focus groups are typically used for the following purposes (Cohen, Manion and Morrison, 2011):

- Generating hypotheses that derive from the insights of group participants;
- Gathering qualitative data, such as data on attitudes, values and opinions;
- Generating data quickly and at low cost;
- Empowering participants to speak out, in their own words.

A focus group was favoured over semi-structured interviews for several reasons. Firstly, focus groups enable group discussion around the focus topic and it is possible to capture contrasting perspectives from participants within the immediate context of the group discussion. As Willig (2013; 35) states, focus groups: “mobilize participants to respond to and comment on one another’s contributions. In this way, statements are challenged, extended, developed or qualified in ways that generate rich data for the researcher”. Such data may not be readily available via semi-structured interviews. Secondly, focus groups enable efficient gathering of data, whereas data collection via a series of interviews may be labour intensive in

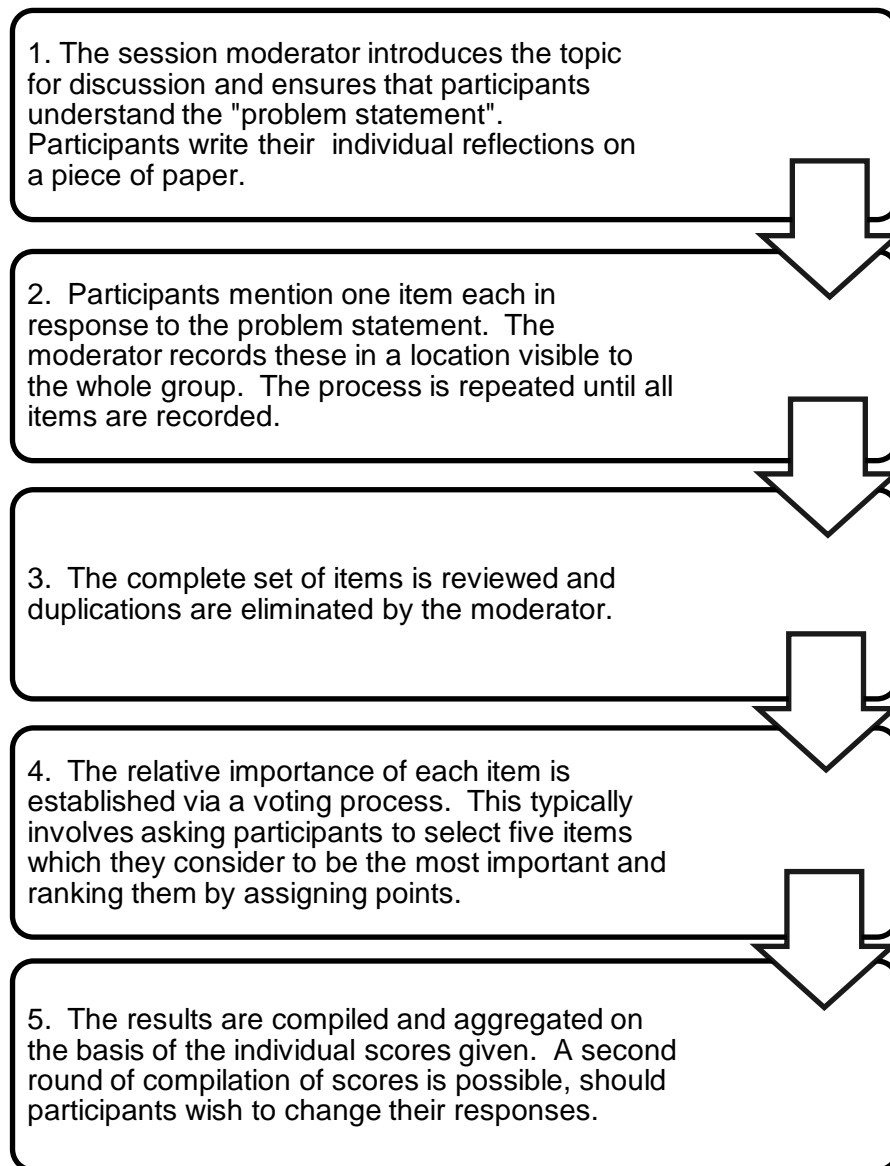
comparison. Thirdly, focus groups can take place in less artificial settings than one-to-one interviews and are intended to provide participants with the opportunity to interact in the same way that they would outside of the research context, thereby increasing the ecological validity of the data obtained via group discussions (Willig, 2013).

However, it has been argued that whilst group-based discussion may generate a variety of responses, such discussion may also inhibit the exchange of opinions and may even lead to the loss of minority or opposing points of view (Gordon and Langmaid, 1988). Focus groups also have the potential to be dominated by strong personalities and more vocal members (de Ruyter, 1996; 44). Elements of Nominal Group Technique were therefore employed in the current study to address the limitations of a traditional focus group design and to ensure that all participants had the opportunity to contribute; this technique will now be discussed.

### **3.8.2 Nominal Group Technique**

Nominal group technique (NGT, Delbecq et al., 1975) is considered to be a structured alternative to, or possible component within, traditional focus group designs. This process requires the development of well-articulated research questions (Elliott and Shewchuk, 2002; 71) and includes several key steps (see Figure 3.3).

This format collects participants' opinions through structured processes, whilst guarding against the possibility of group polarisation experienced within focus group interactions. NGT thereby optimises the breadth and diversity of responses obtained as all participants are able to contribute equally (Elliott and Shewchuck, 2002). The weighting system used provides a valid representation of the range of views held by the group of participants, with all contributions/themes agreed with the participants within the immediate context of the session (Elliott and Shewchuck, 2002; 68).



**Figure 3.3 – An illustration of the Negative Group Technique employed in Phase Two of the current research (from de Ruyter, 1996; 45).**

### **3.8.3 Phase Two Research Questions**

The overall focus for Phase Two was as follows:

*“An exploration of participants’ perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention’s contribution to this”.*

The need to translate this focus into clearly defined research questions has been emphasised. The following research questions were, therefore, those used in the focus group sessions:

1. Have you noticed any changes in how often you worry since attending the programme? (Assessing frequency of worries).
2. You have said whether you worry more often or less often since the programme. Now tell me about the size of your worries: are these bigger or smaller since the programme? (Assessing severity of worries).
3. When you are feeling worried or anxious, what helps you to cope? (Focusing on coping skills).
4. Have you used any different strategies for managing your worries, since you attended the programme? (Assessing the output of the intervention).
5. What strategies, if any, have you found to be the most useful? (Assessing preferred coping mechanisms).
6. What did you like best about the programme? (Assessing programme qualities).
7. What was most useful? (Assessing programme qualities).
8. What needs to change about the programme/what would make the programme better? (Assessing possible programme alterations).

Questions 3-5 were considered as open questions, associated with traditional focus group discussions, whilst questions 6-8 were considered in an NGT format. Questions 1-2 followed a Likert Scale format, as below.

**Question 2. I worry:**

Very much less	Somewhat less	No change	Somewhat more	Very much more
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Questions 1-2 were intended as introductory items, designed to be answered on an individualised basis by participants, as opposed to forming the basis for group discussion. These items were included following recommendations from de Ruyter (1996) regarding the need to provide NGT participants with a 'warm-up' item to familiarise them with the broader topic for discussion.

### **3.8.4 Phase Two data analysis procedures**

Data analysis of the responses from the focus group incorporated Thematic Analysis for questions 3 to 5, based upon Braun and Clarke's six stage model of Thematic Analysis (2006) and NGT-based analysis for questions 6 to 8. As outlined in section 3.8.2, NGT analysis provides ranked items and an indication of key themes derived from participants' responses. A full account of data analysis procedures is provided in chapter four.

## **3.9 Research Study**

### **3.9.1 Stakeholders**

There were three main stakeholder groups within the current study:

- (i) The University of Nottingham;
- (ii) The Local Authority (LA) within which the research is conducted and the associated Educational Psychology Service, with whom the researcher is on a professional placement;
- (iii) The participating school.

The involvement of these stakeholders will now be outlined in sections 3.9.2 - 3.9.4.

### **3.9.2 The University of Nottingham**

This research is a requirement of the Doctorate in Applied Educational Psychology at the University of Nottingham. TEPs are required to complete a research study of this nature, ensuring that certain criteria (regarding length and methodological rigour) are met (Nottingham, 2013; 15). TEPs have historically developed research projects which focus upon the evaluation of educational interventions, in order to broaden the empirical evidence base for such approaches and produce positive outcomes for children and young people (Nottingham, 2011; 15).

The researcher believes that the current study meets those criteria specified by the University of Nottingham.

### **3.9.3 The Local Authority**

The researcher is currently working in an EPS in a large West Midlands county LA (section 2.3.2) on a professional placement as part of Doctoral training. The focus for this study and the design used were agreed with the Senior Psychologists at the EPS in the autumn of 2012. The local impetus for undertaking this research is detailed in section 2.3.2 ('The Local Context'). The researcher believes that this study is in line with the LA's commitment to Early Intervention with Special Educational and Additional Needs outlined in section 2.3.2.

### **3.9.4 The Participating School**

The participating school is a key stakeholder within the current study. During initial consultations with the school (as part of the researcher's role as the link TEP for the school), it became apparent that a number of students were experiencing anxiety-related needs (see section 2.3.2.2). The school volunteered to the implementation of this research and the CBT-based intervention following this initial consultation with the researcher. The school thereby sought to implement preventative intervention support, designed to benefit their students, in line with the principles outlined in section 2.3.2.2 and Figure 2.1.

The SENCo (a member of the Senior Leadership Team at the school) and Associate SENCo were key contacts throughout the duration of this research. Liaison with these contacts and with the Head teacher ensured that the School Leadership Team was kept informed of key research developments.

The school and parents will receive evaluative feedback on the outcomes of this study in the form of written summaries, detailing the progress made by each intervention group as a whole.



### **3.9.5 The Researcher**

Mixed methods and qualitative research requires the researcher to demonstrate reflexivity: “An attitude of attending systematically to the context of knowledge construction, especially to the effect of the researcher, at every step of the research process” (Malterud, 2001; 484). In particular, it has been argued that a researcher’s personal background and professional history will influence their choice of topic(s) for investigation, the methods deemed to be most appropriate, the type of findings/data deemed most desirable and the conclusions drawn (Malterud, 2001; 483).

I would describe myself as a white, middle class, British, male Trainee EP, aged in my mid-twenties. I have previous professional experience of delivering CBT-based interventions with students experiencing anxiety. This may have impacted upon my expectations of what CBT-based support should entail. I also have a personal interest in developing efficacious interventions for addressing emotional well-being and mental health needs and I will need to be aware of this during data analysis, as this could bias my interpretations of the data obtained.

## **3.10 Intervention Procedure**

The following sections detail the research procedures undertaken in this study. The aim is to provide clarity on the investigation as a whole so that replication may be possible in future research. Information is provided regarding the participating school and students, consent procedures, data collection procedures and the intervention phase.

### **3.10.1 Contextual Information**

#### **3.10.1.1 *School Information***

The aim was to recruit participants within the age range specified in section 2.10 (11 years upwards), in order to explore the efficacy of CBT-based support for secondary-age students when implemented in a preventative

manner. The researcher contacted secondary schools from their own link schools within the LA, with one secondary school showing an interest in participating. The researcher recruited the support of school senior management and key teaching staff through a brief presentation on the nature of the intervention and the aims of the project. Approval for the study was provided by the Head teacher.

The school is a large non-maintained secondary school of academy status with approximately 1,629 students, aged 11-18 years (OFSTED, 2012) and is located in the county town of a large West Midlands local authority. The town boasts good socioeconomic status, as reflected in the below average proportion of students at the school known to be eligible for free school meals (OFSTED, 2012). The proportions of students from minority ethnic backgrounds and those learning English as an additional language are both above average; students from Indian heritage form the largest group after students of white-British descent. The number of disabled students and students with Special Educational Needs is below average (OFSTED, 2012).

The school has a long-standing relationship with the EPS and they have continued to subscribe to EPS support following the LA's decision to trade Educational Psychology services from 2010.

#### **3.10.1.2      *Information regarding participants***

Parental consent was provided for sharing of student information with the researcher, in order to ascertain the demographics of the participant sample. Information was sought regarding participants' gender, age, ethnicity, religion and spoken languages. Consideration was also given to whether participants had recognised Special Educational Needs and/or received additional school-based intervention support.

The final study included 18 students from year 8; 7 males and 11 females. 17 students (94%) were White British, whilst one male student was of Indian heritage. 17 students (94%) spoke English as their first language; one male student spoke Punjabi as his first language at home but was considered to

be fluent in spoken English in school. Participant ages ranged from 12 years 5 months to 13 years 4 months (mean = 12 years 11 months).

Regarding religious background, five participants (28%) were Christian, one participant (5%) was Sikh, three participants (17%) were specified as 'other religion' and 9 participants (50%) did not specify a religious affiliation.

None of the participants in the final study had any recognised Special Educational Needs or disabilities and all were accessing a full-time timetable without any additional intervention outside of mainstream lessons. None of the participants had previously accessed intervention support for anxiety-related needs or intervention support of a CBT-based nature.

The final sample is outlined in section 3.10.3.2.

### **3.10.2 Consent procedures**

Ethical approval for this study was obtained from the University of Nottingham's School of Psychology Ethics Committee (appendix 5), and the study was carried out with ethical sensitivity. Full ethical considerations are reported in section 3.17. The procedures below were carried out with due awareness of the sensitivity of the topic of anxiety, and section 3.17 conveys the considerable reflection undertaken to achieve careful processes.

#### **3.10.2.1 *Parents information evening***

The researcher conducted an information evening for parents of potential participants prior to the deadline for parental consent to the screening process. This session included a brief presentation on the principles of CBT and an outline of the proposed intervention and research study. Parents were informed of the consent procedures for students' participation in both the screening process and eventual intervention, should their children be considered as possible intervention participants. Information was also provided regarding the pre/post data collection arrangements. This session enabled parents to ask questions about the project and maximised the possibility of informed parental consent.

### **3.10.2.2      *Consent procedures for Phases One and Two***

The researcher wrote to the parents of all 237 students within the school's year 8 cohort, to introduce the study and notify parents of the screening process (appendix 6). Signed parental consent was then sought for student participation in a screening process designed to identify potential participants for the study (see section 3.10.3). Consent for this was sought on an opt-out basis. Parents were required to contact the researcher (appendix 9) if they did not agree for a) their child to participate in the screening process *and* b) for data obtained from their child's participation in the screening measure to be shared with the researcher for analysis. Students were also notified of their ability to opt out at any point before, during or after the screening measure.

Following data analysis, letters were circulated to parents informing them that either: a) their child's responses had *not* highlighted potential indications of anxiety and that intervention attendance would not be required at this time (appendix 11), or b) that their child's responses suggested that their child may benefit from attending the Positive Thinking Programme (appendix 12). Those students identified as demonstrating anxiety were invited to attend the intervention (see section 3.15.1 for an explanation of participant identification). Signed parental and student consent was sought on an opt-in basis for intervention participation, that is, both parties were required to complete a consent form to indicate that they agreed for: a) the student to attend the intervention, b) the student to complete post-intervention measures, and c) the students demographic information to be shared with the researcher (section 3.10.3.2).

Signed parental and student consent was also sought on an opt-in basis for participation in the post-intervention focus groups (Phase Two); parents and students were required to complete a consent form to indicate that they agreed for a) the student to attend the focus group, and b) for the researcher to make a record of the student's views.

### **3.10.2.3      *Student information session***

A student information session was provided for those students identified by the screening measure and for whom parental consent had been provided for intervention participation. This session was provided as a means of maximising students' ability to make an informed decision regarding their consent for participation. Students were introduced to the same concepts as their parents in the parents' information evening, given the opportunity to ask questions to the researcher and provided with student consent forms.

### **3.10.3 Screening Process**

The screening process required students to complete the Spence Children's Anxiety Scale (SCAS; Spence, 1998), discussed further in section 3.15.

11 students opted out of screening, meaning that SCAS questionnaires were sent to the remaining 226 students within the year 8 cohort. Students were given 20 minutes during afternoon registration time in which to complete the questionnaires. The SCAS was introduced to students by form tutors, who were provided with an introductory script by the researcher. Students were provided with the opportunity to ask questions about the measure prior to participation and any questions were recorded by tutors and forwarded to the researcher. They were informed of their ability to defer participation until their questions had been answered and were also reminded of the confidential nature of their answers and their entitlement to withdraw from the process at any time prior to, during or following completion of the SCAS (appendix 17).

Students were required to complete the questionnaires independent of their peers and once completed, questionnaires were sealed within a confidential envelope to be returned to the researcher. Students had access to those teachers and teaching assistants typically present within form time for support with completing the questionnaire. Those who required additional support with reading and comprehending the written questionnaires were provided with additional teaching assistant support.

Of the 226 questionnaires circulated, 157 (69.5%) were fully completed and returned to the researcher for data analysis.

#### **3.10.3.1      *Analysis of data obtained from screening measure***

Participant responses were analysed using an electronic scoring programme, available with the screening questionnaire (Spence, 2014). The SCAS (section 3.15.1) provides six anxiety subscale scores (i.e. generalised anxiety, panic/agoraphobia, social phobia, separation anxiety, obsessive compulsive disorder and physical injury fears), in line with those anxiety subtypes identified within the DSM-V (American Psychiatric Association, 2013). These scores are then combined to give a total anxiety score. Of the 157 questionnaires returned, 37 students (23.6%) were identified as demonstrating potential early anxiety needs on the basis of their total anxiety score, in line with those scoring thresholds identified in section 3.15.1.

Participant identities were protected via the use of a coding system, whereby students' names were replaced by a number when entered into the research database; this system ensured that completed questionnaires remained anonymous to all parties other than the researcher. The hard copies of students' questionnaires were kept in a locked cabinet within the EPS, for which only the researcher had a key.

#### **3.10.3.2      *Study sample***

Of the 37 students identified via the screening process, 19 students received parental permission to attend the intervention. One student declined the opportunity to attend the intervention, meaning a total of 18 students agreed to take part in the current study. A matched pairs allocation process was employed, with participants matched, as closely as possible, on the basis of chronological age and overall anxiety score before being allocated to intervention or wait-list conditions. Randomised allocation was not possible in the current study, owing to the need for the researcher and school staff to consider the social dynamics with the intervention groupings and whether certain students should be grouped together.

The final allocation for each condition is illustrated in Table 3.2.

<b>Demographic details</b>	<b>Intervention</b>	<b>Wait-list comparison group</b>
<b>Total number of participants</b>	8 (2 males, 6 females)	10 (5 males, 5 females)
<b>Mean age</b>	12 years 7 months	12 years 6 months
<b>Number of students at School Action or above on SEN register</b>	0	0
<b>Religious denominations within group</b>	Christian Other religion No religion	Christian Sikh Other religion No religion
<b>Languages spoken within group</b>	English	English, Punjabi
<b>Number of students accessing additional support in the last year: academic, therapeutic or otherwise</b>	0	0

**Table 3.2 - A table to show the demographics of the final intervention and wait-list comparison conditions within the current study**

### **3.11 Intervention details**

Participants attended a weekly CBT-based intervention, the contents of which are outlined further in section 3.11.2. The intervention employed in the current research is referred to as a 'CBT-based intervention' and the reasons for this are as follows:

- i. This programme incorporated key elements of a CBT approach (see sections 2.5.2 and section 3.11).
- ii. This programme of support was developed by the current researcher with reference to several key CBT sources (see section 3.11.1). That is; whilst the researcher is a TEP with professional experience of implementing CBT-based approaches on both individual and small-group bases within professional casework, the researcher is not a qualified Cognitive Behavioural Therapist.

Therefore, 'The Positive Thinking Programme' (PTP) incorporated elements of a CBT approach, but was not claimed to constitute CBT per se. The reasons for developing a CBT-based intervention are now explained.

First; none of the various CBT-based resources available to the researcher (section 3.11.1) provided a structured programme of CBT ready for implementation as an indicated intervention, prompting the creation of intervention sessions for this purpose.

Second, consideration was also given to the more commonly used 'FRIENDS for life' programme (Barrett, 2007). 'FRIENDS for life' is an example of a CBT intervention with a strong evidence base for addressing anxiety and this intervention has been implemented within the UK as part of CBT-orientated research (see Paul, 2011; Clarke, 2011; Green, 2013 for example). However, this approach requires extensive training for a) undertaking intervention delivery, and b) qualifying as a licensed FRIENDS trainer able to train others in intervention delivery, as Green (2013; 91) outlines. Such training was not available to the current researcher within the LA context within which the study was undertaken and it was necessary, therefore, to consider alternative CBT-based programmes.



Third, the FRIENDS intervention comprises ten weekly two hour sessions (Barrett, 2010). The implementation of a programme of this structure within the timetable of the participating secondary school was not practical. The school's daily timetable consisted of five one-hour lessons, meaning a wait-list comparison study consisting of two FRIENDS intervention phases (see section 3.12.2) would have placed considerable logistical demands upon both students and staff. There was a need, therefore, for an intervention programme which included a lesser number of sessions, with a shorter duration of time per session in order to ensure a) compatibility with the school's timetable and b) the availability of school staff for delivery.

### **3.11.1 Development of the Positive Thinking Programme**

The researcher attended a total of eight professional training days in the use of CBT approaches; provided by Licensed Cognitive Behavioural Therapists from the Oxford Cognitive Therapy Centre (OCTC, 2014) for the Educational Psychology Service for whom the researcher worked. Table 3.3 provides an outline of the training contents.

This training, combined with reference to several key CBT resources, provided the basis for the development of the intervention programme (see section 3.11.2). Key resources included; 'Think Good, Feel Good' – a clinician's guide to using CBT with children and young people (Stallard, 2005); 'Anxiety' – A guide to (and materials for) implementing CBT with children and adolescents (Stallard, 2008), and a key contemporary text in the utilisation of CBT children, young people and families (Fuggle, Dunsmuir and Curry; 2013).

Reference was also made to existing intervention programmes used within previous CBT research studies (Muris et al., 2009; Chiu et al., 2013, Miller et al., 2011a, 2011b). Consideration was given to curriculum structure and contents including: psychoeducational content; cognitively-orientated content; behaviourally-orientated content; emotionally and physiologically-orientated content and the number and duration of sessions. Reference to these interventions was imperative for ensuring that the Positive Thinking

Programme was comparable to existing support with regards to programme structure. Adherence to the CBT model outlined in Figure 2.4 was also essential to ensure that intervention planning incorporated all aspects of a CBT framework. Session contents are comparable to those implemented in previous CBT-based intervention research (Muris, 2002; 144). An example of one such intervention is the previously mentioned FRIENDS programme (Barrett, 2004); an outline of which is provided in Table 3.4 ahead of the introduction of the contents of the current intervention in section 3.11.2.

<b>Training session number:</b>	<b>Training session focus:</b>
1	Assessment and formulation skills in CBT
2	Assessment and formulation skills in CBT
3	Basic therapeutic skills
4	Basic therapeutic skills
5	Working with Depression (a focus on intervening with negative thought cycles)
6	Working with Depression (continued)
7	CBT with anxiety disorders
8	CBT with anxiety disorders (continued)

**Table 3.3 – A table outlining the CBT professional training accessed by the researcher whilst on professional placement.**

<b>Session number:</b>	<b>Session focus:</b>
1	Feelings – understanding Feelings in ourselves and others
2	Introduction to Feelings
3	Introduction to Body Clues and Relaxation
4	Helpful and unhelpful self talk
5	Changing unhelpful thoughts into helpful thoughts
6	Introduction to coping step plans
7	Learning from our role models and building support teams
8	Using a problem solving plan
9	Using the FRIENDS skills to help ourselves and others
10	Review and party

**Table 3.4 – A table outlining the intervention sessions included within the FRIENDS Programme (Barrett, 2004).**

Intervention planning and programme structure were overseen by the researcher's professional practice supervisor within the LA EPS; a qualified EP experienced in both the professional role and the LA context. Secondary peer supervision was provided by a separate EP, in order to deliver a reflective perspective and critique of the intervention contents. This individual was a qualified Educational Psychologist within the LA EPS who had also completed the CBT-based professional training detailed previously.

### **3.11.2 The Positive Thinking Programme – Session Contents**

Table 3.5 provides an overview of the topics covered within the Positive Thinking Programme. The final intervention programme was developed for

implementation on an indicated basis with secondary school students demonstrating initial signs of anxiety. The programme comprised six weekly sessions and one pre-programme session designed to introduce participants to the programme. Sessions were one-hour in duration and designed to fit within one school period to ensure feasibility of in-school delivery (as with other studies e.g. Ginsburg, 2011).

It has been stated that CBT support may consist of between 6-16 sessions (Stallard, 2005; 26). The total number of sessions within the Positive Thinking Programme is comparable to other school-based indicated CBT interventions in previous studies (Sheffield et al., 2006; Kiselica et al., 1994; Gillham et al., 2006; Mifsud and Rapee, 2005) each of which included 8 sessions. The Positive Thinking Programme is also similar to previous interventions in terms of overall duration, comprising 7 hours of intervention input, with previous studies providing 6 hours of intervention input (Muris et al., 2002; Muris et al., 2009) across twelve 30-minute sessions.

<b>Session number:</b>	<b>Session focus:</b>	<b>Between sessions task:</b>
<b>Pre-session</b>	<ul style="list-style-type: none"> <li>• Introduction to the programme</li> <li>• pre-measures</li> </ul>	None set.
<b>1</b>	<ul style="list-style-type: none"> <li>• Deciding intervention ground rules</li> <li>• Introducing the link between thoughts, feeling and behaviour</li> </ul>	Thought tracker (i.e. a thought diary designed to encourage participants to list their thoughts, feelings and current circumstances when feeling worried).
<b>2</b>	<ul style="list-style-type: none"> <li>• Thought tracker reviews</li> <li>• Normalising feelings of worry and considering 'common'</li> </ul>	Thought tracker.

	<p>causes of worry in teenagers</p> <ul style="list-style-type: none"> <li>• An introduction to identifying our personal triggers for feelings of anxiety</li> </ul>	
<b>3</b>	<ul style="list-style-type: none"> <li>• Thought tracker reviews</li> <li>• Understanding the physiological symptoms of worry</li> <li>• An introduction to strategies for managing the physiological symptoms of worry</li> </ul>	Thought tracker with consideration to those strategies used to address the physiological symptoms of worry.
<b>4</b>	<ul style="list-style-type: none"> <li>• Thought tracker reviews</li> <li>• Understanding 'thinking errors' (Stallard, 2008; 29) i.e. understanding unhelpful cognitions, possible misinterpretation of events and the behaviour of others and working towards 'balanced thinking'</li> </ul>	Thought trackers with consideration to possible 'thinking errors' and balanced thinking/alternative interpretations.
<b>5</b>	<ul style="list-style-type: none"> <li>• Thought tracker reviews and recap of balanced thinking</li> <li>• Introduction to behavioural coping plans and problem solving plans</li> <li>• Participants identified a personal goal and began to develop a problem solving plan towards achieving this goal</li> </ul>	Problem solving plans. Participants were encouraged to attempt the initial stage of their plan, with consideration given to a) those strategies required for addressing the physiological

		symptoms of anxiety, b) those people to enlist as social support and c) possible rewards for attempting this activity.
<b>6</b>	<ul style="list-style-type: none"> <li>• Thought tracker reviews</li> <li>• Review of behavioural coping plans and problem solving plans</li> <li>• Consideration of 'social networks' and those individuals around the child who may continue to support them post-intervention</li> <li>• Review and end of intervention debriefing</li> </ul>	Thought trackers

**Table 3.5 - A table to show the session contents of the CBT-based intervention used within the current study**

Intervention sessions included a range of activities designed to:

- Educate participants about the physiological symptoms of worry and anxiety;
- Normalise experiences of worry and anxiety;
- Introduce participants to the link between thoughts, feelings and behaviour (as per Figure 2.4);
- Explore possible antecedents and consequences prompting feelings of worry;
- Introduce strategies for managing the emotional and physiological impacts of worry;

- Identify possible unhelpful cognitions which may be underpinning anxieties as a premise for working towards alternative cognitions (Figure 2.5);
- Consider the development of behaviourally-orientated problem solving plans.

These activities were included following guidance from Figure 2.6. Sessions contained several regular activities: an introduction to the sessions and session topic; a recap of ground rules; a review of thought trackers and a between sessions task designed to consolidate participants understanding of session input. Each session began with agenda setting; a key aspect of developing a therapeutic alliance with participants (Fuggle, Dunsmuir and Curry, 2013; 123). This enabled participants to raise topics for discussion in addition to those activities provided by the intervention contents.

### **3.12 Intervention Phase**

Programme sessions for the intervention condition were delivered between November 2013 and January 2014. A two-week break was observed between sessions five and six of the programme, due to national school holidays at the end of the autumn term. Whilst a break in the intervention phase could be considered a threat to treatment integrity, Table 3.5 illustrates that session six was designed as an extension of session five and minimal novel input was provided in the final session. Indeed, the additional gap between sessions provided students with an opportunity to implement those behavioural plans introduced in session five, arguably providing an important opportunity for rehearsal or adaptation of skills.

The intervention condition participants ( $n = 8$ ) were subdivided into two smaller groups, A1 and A2, with four participants in each. This provided a lower participant-to-leader ratio, increasing group manageability for leaders and providing scope for greater student discussion time. Programme group sizes were comparable to those in previous CBT studies (Dadds, Spence, Holland, Barrett, and Laurens, 1997). All 8 intervention condition participants achieved 100% attendance.

All sessions were conducted in the same classroom in a quiet department within school, designated for intervention support. Sessions took place within the school day and timings were varied to ensure that a) students did not miss the same lessons each week, and b) students were present for core subjects (i.e. English, Mathematics, and Science). Each session lasted for one school period (one hour). Regular contact was maintained between the researcher and the session leaders during the intervention phase; weekly meetings were provided for sharing of intervention resources and leaders were provided with the opportunity to discuss session objectives and contents. Leaders were also provided with the researcher's contact details so that they could contact the researcher with any additional queries.

### **3.12.1 Session Leaders**

Intervention sessions were delivered by teaching assistants (TAs) from the participating school. Four TAs were recruited as programme leaders, with two TAs attending each session during the intervention phase. Recruitment of four TAs ensured that intervention leaders were able to cover for one another in the event of unforeseen circumstances (e.g. staff sickness). Previous studies have utilised teaching support staff (e.g. teaching assistants) as intervention leaders for school-based programmes, (e.g. Green, 2013) albeit primarily on a universal basis (Sheffield et al., 2006, Lowry-Webster et al., 2001; 2003). Involving staff in intervention implementation has intuitive appeal, given their knowledge of the context and the potential for existing rapport with students. Rait et al., (2010) advocate the involvement of school staff in the identification and support of children and young people experiencing mental health needs.

A number of factors were involved in the selection of TAs as intervention leaders. First, as indicated in section 2.6, senior school personnel are integral to the planning and implementation of interventions in schools (Forman, Olin, Hoagwood, Crow and Saka, 2009; Kam et al., 2003). Liaison with the Associate SENCo enabled access to a number of TAs with a designated remit for supporting students with additional needs. The Associate SENCo was responsible for allocation and timetabling of TAs



within the school and was therefore able to enlist TA support for programme delivery.

Second, TAs were asked to volunteer for programme delivery. Prior to volunteering, TAs were informed of the nature and structure of the intervention.

Third, whilst it has been suggested that teachers may demonstrate more nuanced teaching during intervention delivery, compared to TAs (Rubie-Davies, Blatchford, Webster, Koutsoubou and Bassett, 2010), the SENCo indicated that the high level of teaching demands precluded teachers from intervention delivery.

The four TAs who volunteered consisted of the Associate SENCo and three teaching assistants (total: three female, one male). All TAs were of white-British ethnicity and were English speakers. The author felt that the relationship between the TAs and students was a supportive one with good student-adult communication.

Webster et al. (2011; 15) claim that TAs should be limited to delivering structured and well-planned interventions for which they must be properly trained and prepared. The TAs were therefore provided with training in CBT-based approaches, including a) an introduction to the underpinning theory behind CBT and relevant facilitator skills and b) the specific contents of the programme sessions, as outlined in Table 3.5. Five 2-hour training sessions were provided in total, with leaders given the opportunity to provide feedback on both the content and associated resources of the sessions, prior to the programme commencing. Training sessions were delivered by the author with training contents critiqued by those colleagues detailed in section 3.11.1.

### **3.12.2 Post Intervention**

Following the intervention condition, post-measures were taken with all participants (see section 3.14). Parent measures were circulated to parents of all participants (n = 18) with 14 (77.8%) returned for data analysis. The wait-list comparison group then accessed their intervention phase which

followed the same format as the intervention condition. No experimental data was taken for participant progress within this phase.

### **3.12.3 Phase Two – Focus Groups**

Following the completion of the intervention and wait-list comparison conditions, all participants were invited to attend the focus group, details of which are provided in section 3.8. This session was conducted by the researcher within the same classroom in which the intervention took place. Focus group sessions lasted for a double lesson (i.e. two hours) and students were reminded of the limits of confidentiality and their right to withdraw at any stage, prior to participation. Those students who a) had signed parental consent for focus group participation, and b) had also provided their own signed consent for participation were included within Phase Two.

### **3.13 Sample size calculations**

Prior to the intervention commencing, calculations were undertaken in order to establish a desirable sample size for the current research. Establishing an appropriate sample size is important if a study is to generate enough statistical power to avoid a Type II error (i.e. the failure to reject a false null hypothesis) (Button et al., 2013). Dancey and Reidy (2011; 253) indicate that preferable sample sizes can be calculated if a researcher has established: a) a desired power level, b) an effect size, and c) a criterion significance level (i.e. the value of the significance level at which the researcher may accept that results are probably not due to sampling error).

When considering effect sizes, it is important to make reference to pre-existing research studies. A range of CBT effect sizes have been reported in previous systematic reviews, with Neil and Christensen (2009) reporting effect sizes of between 0.11 and 1.37 across a total of 21 studies reporting positive effects for CBT in addressing young people's anxiety. The mean effect size across these studies was smaller, however ( $ES=0.39$ ). This pre-existing mean effect size was considered in the sample size calculations for

the current study, alongside a power level of 0.7 and a criterion significance level of 0.05. When these factors are considered, it was established that a total sample of 40 participants (i.e. 20 participants per condition) would provide a power value of 0.70 (Friendly, 2012).

Optimising sample size is also important for ensuring that a study sample is as representative as possible of the wider population they are derived from (Cohen, Manion and Morrison, 2011). When the desired sample cannot be obtained, studies may experience low statistical power and the possibility of discovering genuine intervention effects may be reduced. The generalisability of findings to broader populations will also be reduced.

The current study experienced a limited sample size, as discussed further in section 5.4.1.3. Gulliford (2015, in press) argued that educational psychology doctoral research can experience difficulties with recruiting desired sample sizes, given the context within which such research takes place and the limited resources available to doctoral researcher-practitioners. It is possible that a larger sample may have increased the confidence with which Phase One findings could be generalised to the wider year 8 cohort and indeed other similar populations.

### **3.14 Data collection procedures**

Pre-test and post-test data collection consisted of both student-report measures (i.e. SCAS) and parent-report measures (Spence Children's Anxiety Scale – Parent-report, SCAS-P, Spence, 1998), both outlined in section 3.15. An illustration of data collection points is provided in Figure 3.4.

Participants' screening measures scores were used as Time 1 data, whilst parents of all participants (n=18) were required to complete the SCAS-P prior to intervention and wait-list conditions commencing. Parents then received a letter notifying them of whether their child had been allocated to the intervention or wait-list condition; they were also informed of the start date of the intervention phase for their child's group (appendices 15-16). Parents

were informed that their child may be within a wait-list condition, prior to providing opt-in consent for intervention participation.

Following the completion of the intervention and wait-list comparison conditions, all participants and parents completed their respective measures, providing Time 2 (post-test) data. Participants in the intervention condition completed their post measures after their final intervention session whilst participants in the wait-list comparison condition attended a brief session with the intervention leaders in order to complete these measures. This session was undertaken in the same week as the time 2 measures were taken for the intervention group.

<p><b>Time 1 measures (Pre-test):</b></p> <ul style="list-style-type: none"> <li>• SCAS</li> <li>• SCAS-P</li> </ul> <p><b>Taken end October 2013</b></p>	<p><b>Intervention group takes place (Duration 6 weeks)</b></p>	<p><b>Time 2 measures (Post-test):</b></p> <ul style="list-style-type: none"> <li>• SCAS</li> <li>• SCAS-P</li> </ul> <p><b>Taken start January 2014</b></p>
	<p><b>Wait-list comparison group attend timetabled lessons (Duration 6 weeks)</b></p>	

**Figure 3.4 – A figure illustrating the data collection points within Phase One of the current study**

### **3.15 Measures**

#### **3.15.1 The Spence Child Anxiety Scale (SCAS; Spence, 1998)**

The SCAS was chosen to measure the dependent variable relevant to Research Question One (student's self-reported anxiety).

The SCAS (appendix 18) has been widely used in research (Barrett and Turner, 2001; Lory-Webster, Barrett and Dadds, 2001; Lock and Barrett, 2003; Mifsud and Rapee, 2005; Stallard, Simpson, Anderson and Goddard, 2008; Hudson, Rapee, Deveney, Schniering, Lyneham and Bovopoulos,

2009). It is a student-report questionnaire designed to assess six areas of anxiety, in line with the Diagnostic and Statistical Manual of Mental Disorders – fifth edition (DSM-V, American Psychiatric Association, 2013); generalised anxiety, panic/agoraphobia, social phobia, separation anxiety, obsessive compulsive disorder and physical injury fears. It includes 44 items and is suitable for individuals aged 8-15 years. Spence indicates that the SCAS can be used to “evaluate change over time in response to treatment or prevention programs, and to identify children who are at risk of anxiety problems and who many benefit from early intervention.” (Spence, 2014).

Questionnaire items consist of a statement and a four-point answering scale ranging from ‘never’ to ‘always’, respondents are required to indicate the extent to which the statement applies to their experiences, for example:

<b>I worry about things</b>	<b>Never</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>
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(Spence, 1998)

Participant responses generate subscale scores for each of the six areas of anxiety, and a total anxiety score combining all six subscale scores. Spence suggests that a score of 1 standard deviation above the mean for a subscale or the total score would warrant further clinical investigation, i.e. indicating higher levels of anxiety (Spence, 2014), whilst a score of 0.5 of a standard deviation above the mean for the total score indicates “an elevated, but not clinical level of anxiety” (Spence, 2014). Those 37 participants identified via the screening process scored at least 0.5 SD above the mean for the total score. A table of means is provided in appendix 20.

This measure has shown good reliability and validity alongside other comparable measures (Spence, Barrett and Turner, 2003), including strong correlation with responses on the Revised Children’s Manifest Anxiety Scale (RCMAS) (Reynolds and Richmond, 1978). High internal consistency is reported (coefficient alpha of 0.92) as well as an acceptable 12 week test-retest reliability (coefficient alpha of 0.63) (Spence, Barrett and Turner, 2003).

The SCAS was chosen as it has been widely used in comparable studies (Barrett and Turner, 2001; Lowry-Webster, Barrett and Dadds, 2001; Lock and Barrett, 2003; Mifsud and Rapee, 2005; Stallard, Simpson, Anderson and Goddard, 2008; Hudson, Rapee, Deveney, Schniering, Lyneham and Bovopoulos, 2009), it is relatively brief and is available free to researchers. There is also a comparable parent-report measure, listed below.

Alternative measures opted against included the Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds and Richmond, 1978), which the researcher was unable to access and The Paediatric Index of Emotional Distress (PI-ED) (O'Connor et al., 2010); a measure of emotional distress. The PI-ED was opted against as it only provides a solitary score of emotional distress, without differentiating between the anxiety or depression levels experienced by participants.

### **3.15.2 Spence Children's Anxiety Scale for Parents (SCAS-P; Spence, 1998)**

The SCAS-P was chosen to measure the dependent variable relevant to Research Question Two (parent-reports of student anxiety).

The SCAS-P is a parent-report measure following the same format as the SCAS. It comprises 38 items, measured across the same 4-point scale, producing subscale scores relating to the six areas of anxiety recognised in the DSM-V (American Psychiatric Association, 2013), and a total anxiety score for each student.

The SCAS-P has demonstrated good convergent validity with the SCAS (Nuata et al., 2004) and a comparable parent questionnaire (The Child Behavior Check List, Achenback, 1991) and is considered to be a reliable and valid measure for investigating anxiety in children and young people (Nuata et al., 2004). These measures were selected as they are widely used in existing research, they are free to access and they are brief in nature.

### 3.16 Reliability and Validity of the current research study

Undertaking research in applied settings allows researchers to explore phenomena of interest within their naturalistic context. The current study is an example of applied 'real world research' (Robson, 2011), having taken place in the context of the participating school. It is through conducting research in the 'open system' of the school, however, that the research process becomes open to the influence of extraneous, confounding variables which may impact the validity and reliability of any findings.

The threats to the reliability and validity of the current study's findings will now be considered, along with those actions taken to guard against any potential threats. Phase One and Two employ different research methods, with differing threats to reliability and validity of their respective findings, and as such, each phase will be discussed separately.

#### 3.16.1 Phase One considerations

##### 3.16.1.1 *Internal Validity*

Internal validity refers to the extent to which any effects found within a study can be considered to be due to the manipulations of the identified independent variable(s). Therefore, a study's internal validity is dependent upon the ability to control for extraneous variables (Shadish, Cook and Campbell, 2001). Table 3.6 outlines the threats to internal validity identified in Phase One, and the actions taken to address these.

Threat to Internal Validity	Description of this threat	Action taken to address the threat
<b>Mortality</b>	Participant drop out at any point during the study.	Participants were fully briefed about the intervention and associated research study prior to consenting for a) the

		screening process and b) participation in the intervention. Parents were also provided with a full briefing prior to parental consent for both the screening process and students' participation in the intervention.
<b>Maturation</b>	The extent to which any observed changes are due to typical developmental progress during the study time period. These developments may contribute to fluctuation in the dependent variable.	The use of a wait-list comparison group provides an indication of a 'natural' rate of maturation, outside of experimental conditions.
<b>History</b>	The development of environmental factors over time, which may impact upon the dependent variable. For example; school-based changes between Time 1 and Time 2.	The use of a wait-list comparison group guards against this threat.
<b>Design contamination</b>	The possibility of wait-list comparison participants benefitting from the intervention through interaction with and access to intervention condition participants. This is a greater threat in the current study due to all participants being from the same cohort and some participants being	The intervention was delivered in a quiet, closed classroom within the learning support department of the school. The control group participants attended typical timetabled lessons during the intervention



	from the same tutor groups.	period, in a separate part of the school campus. Session leaders were informed of the need to avoid sharing of intervention information with wait-list participants prior to the completion of the intervention phase. Statistical analyses regarding the progress made by wait-list participants during the initial intervention phase will help highlight any positive changes in the wait-list group that may be attributable to this threat.
<b>Fidelity of intervention</b>	The intervention may not be delivered as intended.	An independent observer undertook fidelity checks to ensure that the intervention was being delivered as intended. See Section 3.16.1.1.5 below.
<b>Selection</b>	The extent to which the groups are equivalent at the beginning of the study	Participants were allocated to intervention or wait-list conditions on the basis of a matched pairs design, in order to

		<p>optimise comparability of groupings.</p> <p>Statistical analyses were undertaken to assess the level of homogeneity between groups prior to the intervention stage.</p>
<b>Ambiguity of causal direction</b>	The extent to which the author can be confident that manipulation of the IV prompts a fluctuation in the DV.	The use a wait-list comparison group increases the extent to which statistical trends may be attributed to intervention participation.
<b>Compensatory equalisation of treatment conditions</b>	When members of the wait-list/non-experimental group attempt to compensate for not receiving the intervention.	Wait-list participants were informed that they would receive the same intervention at a later date, in order to guard against compensatory behaviours.
<b>Compensatory rivalry</b>	When the comparison/control group receive compensatory treatment as a result of not receiving the intervention.	Wait-list participants attended typical timetabled sessions during the intervention phase to minimise the possibility of compensatory activities. Statistical analyses regarding the progress made by wait-list participants during the initial intervention

		phase will help highlight any positive changes in the wait-list group that may be attributable to this threat.
<b>Hawthorne effect</b>	The participants may be affected by participation rather than intervention effects.	This possible threat is acknowledged. Experimental participation and contact with the session leaders may lead to possible positive outcomes, as opposed to any outcomes being attributable to the contents of the intervention specifically. The participants' perceptions regarding those mechanisms which may have led to positive outcomes post-intervention was a key topic discussed within the focus groups in Phase Two of the study.

**Table 3.6 – A table of those threats to Internal Validity in Phase One of the current study**

#### **3.16.1.1.5 Treatment integrity**

Fidelity checks were undertaken on sessions within the intervention phase. These checks were undertaken by Assistant Educational Psychologists (AEPs). Both AEPs were psychology graduates in their mid twenties (one male, one female) and both were employed by the LA EPS at the time of their involvement. Both had accessed the same CBT professional training as the author (section 3.11.1) with one AEP having previous professional experience as a CBT practitioner with the local IAPT project. AEPs used fidelity checklists, provided by the researcher, to subjectively rate the extent to which they felt each of the activities within a session had been completed. Checklists were developed from the intervention session plans and AEPs provided with copies of the contents and aims of each activity with the sessions, to inform their fidelity checks. AEPs were available to provide fidelity checks on five of the seven sessions; checks were not possible for the pre-session and session two, due to AEP workload. Fidelity checklists are included in appendices 33-37.

AEPs were blind to the experimental hypotheses. This action was taken in order to build upon the recommendations made by Green (2013).

#### **3.16.1.2 External Validity**

External validity refers to the extent to which the findings of a study may be generalised to other populations (Coolican, 2007). The following actions were undertaken in order to maximise the external validity of those findings obtained within the current study:

- Thorough descriptions of the research context/setting, participant sample and intervention are provided.
- The measures used boast good convergent, divergent and construct validity.
- Standardised procedures for measure administration were followed, to enhance the reliability and validity of the findings.

### 3.16.1.3 *Threats to Reliability*

Reliability refers to the consistency of a study's findings (Robson, 2011; 85) and the extent to which they may be replicated (Coolican, 2007; 50).

Threat to reliability	Description of this threat	Action(s) taken to address the threat
<b>The reliability of the measures used</b>	The measures (i.e. SCAS and SCAS-P) may be unreliable	Published, pre-established measures were utilised in order to increase the reliability of the study.
	Participants may lack the ability to access the measure.	Participants were provided with access to teaching support for completing the measures, as required. The measures chosen were suitable for participants within the age range relevant to the study sample.
	Student self-report measures may be unreliable.	Participants were provided with access to teaching support for completing the measures, as required, to ensure measures were understandable to participants. Actions for minimising participant response bias are outlined below.
<b>Participant error</b>	When factors (e.g. fatigue, emotional affect) influence the participants' responses	This threat is acknowledged. Participants were provided with teaching assistant

	to measures (e.g. time 1 or time 2).	support for completing the measures.
<b>Experimenter Bias</b>	When the experimenter influences the outcomes of the research by behaving in a different manner towards participants from each contrasting condition.	<p>The researcher was not directly involved in the intervention sessions or during the completion of intervention measures.</p> <p>Participants completed measures under the supervision of teaching staff and teaching assistants. All teaching staff were provided with an identical script by the researcher to ensure that the same instructions were provided to participants regardless of their experimental condition.</p>
<b>Construct reliability</b>	The extent to which the measures (SCAS and SCAS-P) measure the construct which they are intended to.	The measures used boasted good construct validity compared to alternative measures.
<b>Response bias</b>	When participants respond to measures in the manner which they feel the researcher wants them to, as opposed to following their own beliefs.	Teaching staff were provided with standardised instructions for introducing the student-report measures. During these instructions participants were informed that there were no right or wrong answers.

**Table 3.7 – A table of those threats to reliability associated with Phase One of the current study**

### 3.16.2 Phase Two considerations

Issues of reliability and validity are typically associated with positivist, quantitative research (Golafshani, 2003; 597) and have been considered to be less applicable to naturalistic research (Shenton, 2004; 63). However, Stenbacka (2001) claims that the concept of reliability also applies to qualitative methods (i.e. Phase Two); arguing that whilst reliability may be a concept associated with the quality of quantitative research (which has a 'purpose of explaining') it is also associated with quality-assurance in qualitative research, whereby the purpose is 'generating understanding' (Stenbacka, 2001; 551).

Therefore, it has been argued that in order to maximise reliability in qualitative methods, examination of the 'trustworthiness' of the methods used is required (Golafshani, 2003; 601). Guba (1981) proposed four constructs which correspond to reliability criteria employed by positivist researchers. Those criteria for establishing trustworthiness and the actions taken to meet these criteria within the current research are detailed in Table 3.8.

Criteria	Closest associated positivist concept	Actions taken to address the criteria (derived from Shenton, 2004)
Credibility: "How congruent are the findings with reality?" (Shenton, 2004; 64). That is, to what extent are the reconstructions of the researcher equivalent to and credible to the perceptions and understanding of the participants?	Internal validity	<ul style="list-style-type: none"><li>• <i>The development of an early familiarity with the culture of the participating organisation.</i> Obtained via the researcher's role as the link TEP for the school for one year prior to the commencement of the research.</li><li>• <i>Tactics to help ensure honesty in informants</i></li></ul>

		<p><i>when contributing data.</i></p> <p>Each person approached for participation in the focus group was given the opportunity to refuse participation and the right to withdraw at any point in the process. This action ensured that those who were involved in the groups were genuinely willing to participate.</p> <ul style="list-style-type: none"> <li>• <i>Member checks.</i> Checks relating to the accuracy of the data obtained via the focus group were taken within the sessions, to ensure participants were agreeable to the conclusions drawn. This is a key aspect of the Nominal Group Technique used.</li> </ul>
<p>Transferability:</p> <p>The generalisation of findings from a qualitative project.</p> <p>True generalisability of findings derived from a qualitative approach to data collection can be difficult as “all observations are defined by the specific contexts in which they occur” (Shenton, 2004; 69). The researcher must therefore provide sufficient contextual information to enable the</p>	<p>External validity</p>	<ul style="list-style-type: none"> <li>• Using a “thick description” of the study context to assist the reader (Shenton, 2004; 69).</li> </ul>



reader to consider whether the findings are applicable to their situation.		
<p>Dependability:</p> <p>The stability or dependability of the inquiry processes used by the researcher. The researcher should provide sufficient data regarding the means of; collecting the data, interpreting the findings and reporting results. The logic used for selecting participants and area(s) of inquiry should be clearly presented.</p>	Reliability	<ul style="list-style-type: none"> <li>• A clear description is provided regarding the entire research process, the decisions made within this process and the justifications for these decisions.</li> </ul>
<p>Confirmability:</p> <p>“The concept of confirmability is the qualitative investigator’s comparable concern to objectivity. Here steps must be taken to help ensure as far as possible that the work’s findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher” (Shenton, 2004; 72).</p>	Objectivity	<ul style="list-style-type: none"> <li>• Nominal Group Technique required the researcher to liaise with the participants to ensure that the ideas recorded were representative of the views expressed by participants.</li> <li>• The justifications for key decisions made within the project are detailed.</li> <li>• Detailed methodological description allows the reader to ascertain the extent to which they trust the conclusions drawn from the data obtained.</li> </ul>

**Table 3.8 – A table outlining the criteria for trustworthiness in qualitative research (Adapted from Shenton, 2004).**

### **3.17 Ethical Considerations**

Due consideration was given to several key ethical guidelines during the development and implementation of the current study, including those published by the British Psychological Society (BPS, 2009; DECP, 2002); the Association of Educational Psychologists (AEP, 2011); the Health & Care Professions Council (HCPC, 2008) and the University of Nottingham (Nottingham, 2013). Full ethical approval for the current research was obtained from the University of Nottingham ethics committee in June 2013 following careful consideration of the consent procedures required (Appendix 5). Key ethical considerations within the current study will now be discussed.

Obtaining informed parental and student consent for intervention participation was imperative (Standard 1.3; BPS, 2009; 12, Standard 6.2, AEP, 2011; 2, Standard 2.1; DECP, 2002; 5). Following liaison with the ethics committee, ethical approval was granted for the use of opt-out consent for the screening process, on the proviso that participants were provided with a clear indication of the extent of opt-out consent and importantly, what they were consenting to, should they not opt-out (Appendix 6). Opt-out consent forms were to be returned if parents and students did not agree to participate in the screen and share the student's responses with the researcher. Students and parents were briefed on the nature of the intervention and the associated research prior to participation in the screening process (and subsequent intervention) through the use of consent letters and supporting documentation (appendices 6-10) and through the provision of parent and student information evenings, delivered by the researcher and session leaders. The intention was to act in the best interests of all parties involved in the study (HCPC, 2008; 8) and to ensure that students and their parents had understood the nature of the research prior to providing signed consent. Opt-in consent was sought for participation in the intervention phase. Prior to providing opt-in consent, parents and students were informed that opt-in consent indicated:

- a) Agreement for student participation in this study, which may entail;
- b) Agreement to completion of time 2 questionnaires, and;

- c) Agreement for the researcher to access additional information about the child (i.e. age, ethnicity, religious status) in order to describe the demographics within each condition.

These briefings were used to outline the standards of confidentiality and anonymity applicable to both participant data obtained from the measures and to students' contributions within the sessions (Standard 2.3; DECP, 2002; 8, Standard 5, AEP; 2011; 2, Standard 1.2; BPS, 2009; 10). All data was anonymised and filed securely and parents, students and school staff were informed of those parties who may access the data, once obtained (i.e. the researcher and their research supervisor).

Whilst confidentiality principles are of high importance within research, the researcher was aware of the possible need to breach confidentiality where concerns are raised about an individual's safety (Standard 1.2(vi) (a), BPS; 2009; 11). All parties were informed of the limits to confidentiality prior to providing informed consent for intervention participation; students were also reminded of the limits of confidentiality prior to each session. In the event of a disclosure, school and LA safeguarding processes were to be followed.

All parents and students were notified of their ability to withdraw from participation at any point in the study (Standards 3.3(vii), 1.4(ii) and (iii); BPS, 2009). Participants were informed that upon withdrawal, their data would be removed from all analysis. Participants were also reminded of their right to withdraw at any point prior to each intervention session.

Equality of opportunity to access the intervention was also considered. The circulation of a screening measure to all year 8 students who had agreed to complete the measure and the use of standardised criteria for the identification of possible anxiety allowed for equal access to the intervention. The waiting-list comparison design was utilised to ensure that participants' entitlement to intervention participation was fulfilled, as it would have been unethical to allocate students to a traditional control-group and deprive them from an intervention which they may have benefitted from. All parents and students were informed of the nature of the wait-list design and the potential

for students to be allocated to the intervention or wait-list condition, prior to them providing informed consent for intervention participation.

The importance of minimising the risk for additional harm (psychological or otherwise) was also considered (BPS, 2010; 13). In particular parents and students were provided with the opportunity to raise any queries that they may have prior to intervention participation, via the parent and student briefing meetings. The researchers' contact details were distributed to all parties to provide additional means for stakeholders to raise their concerns or questions. Parents and students were also reassured of the 'typical' level of support students would receive, regardless of wait-list or intervention condition allocation. That is, parents and students were notified that if a student accessed any school-based intervention support prior to the research beginning, then this would continue throughout the research project. Parents and students were also reminded of the school's usual SEN support procedures should any additional needs arise during the course of the intervention.

As the researcher was also the link TEP for the school, it was also necessary to provide clarity of the author's role within the context of the research (DECP, 2002; 13) prior to the study commencing. Parents, staff and students were informed that participation in the study and intervention did not constitute EPS casework.

All stakeholders will also be provided with written research summaries at the end of the research. Given the nomothetic nature of the data obtained, these summaries will outline overall group performance as opposed to individualised pupil progress; a concept indicated to parents during the parents' evening briefing. Research summaries will also provide parents with an overview of the contents of each session and strategies introduced. Participants, staff and parents will be given the opportunity to contact the researcher to discuss the study's findings further (Standard 4.3.2; DECP, 2002; 17, Standard 3.4.; BPS, 2009; 20).

### **3.18 Summary of Method Chapter**

This chapter has detailed the research methodology for the current study. This study investigates the impact of an indicated CBT-based intervention on the anxiety of secondary school students. A pragmatic epistemological stance was adhered to, with a sequential explanatory mixed methods approach implemented. This design incorporated two phases; a quasi-experiment with a pre-test/post-test wait-list comparison design and a post-intervention focus group. Participants' anxiety was measured via self-report and parent-report measures. Qualitative methods were also employed to ascertain participants' perceptions of the programme and the potentially efficacious mechanisms of change underpinning CBT-based support.

The notion of 'utility' (Bryman, 2006) is important here, suggesting that combining two approaches will be more useful to practitioners and others. Whilst phase one employed quantitative methods aimed at evaluating the impact of CBT delivered in an indicated manner, phase two is just as, if not more useful for those practitioners seeking to understand how CBT may bring about positive change for participants seeking to reduce their anxiety.

The following chapter now details the data analysis procedures for the current study and the results obtained.

# Results

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## 4. Results

### 4.1 Introduction

Chapter three detailed those methods used to address the research questions introduced in section 2.11.

The purpose of this chapter is to present the results obtained following data analysis. This study included two phases; a quantitative quasi-experimental phase and a qualitative phase incorporating a focus group. The contrasting quantitative and qualitative data obtained from each phase means that differing approaches to data analysis were required. Consequently, the results for each phase of the study will be considered separately.

Firstly, the results from Phase One will be considered alongside the experimental hypotheses in an attempt to answer the following research questions:

- 1. Does secondary school-age students' self-reported anxiety reduce as a result of participating in an indicated CBT intervention programme?**
- 2. Do parents perceive student anxiety to reduce following secondary school students' participation in an indicated CBT intervention programme?**

Secondly, data obtained from the focus groups within Phase Two will be analysed, in relation to the following research focus:

***“An exploration of participants' perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention's contribution to this”.***

## **4.2 Phase One Results**

### **4.2.1 Data analysis procedures**

Exploration of the research questions for Phase One required the collection of pre-test (time 1) and post-test (time 2) data for both conditions (i.e. experimental and wait-list comparison conditions), as illustrated in section 3.7. The data was statistically analysed in order to test the experimental and null hypotheses outlined in section 3.7.1. The purpose of this analysis was to ascertain whether the independent variable (intervention participation) led to any statistically significant changes in the dependent variables (i.e. students' self-reported anxiety and parental perceptions of students' anxiety).

Intervention participants would need to demonstrate statistically significant reductions in self-reported anxiety or parent-reported perceptions of anxiety, compared to wait-list participants, for any positive changes in the dependent variables to be attributable to attendance of the Positive Thinking Programme.

### **4.2.2 Statistical Tests Employed Within the Current Study**

#### **4.2.2.1 *Descriptive Statistics***

"Descriptive statistics do what they say: they describe, so that researchers can then analyse and interpret what these descriptions mean" (Cohen, Manion and Morrison, 2011; 622). Descriptive statistics should be reported as they clearly communicate results to the reader (Wright, 2003; 133), and contribute to the exploration of experimental outcomes through their role in calculations regarding the magnitude and direction of experimental effects. The mean and standard deviations are reported for those data sets relevant to each research question, with descriptive statistics provided for each condition and the overall sample.

#### **4.2.2.2 Inferential Statistics**

Inferential statistics differ from descriptive statistics in that they consider the ability to generalise findings from a sample to wider populations (Dancey and Reidy, 2011; 43). A study's research design, research questions, experimental hypotheses and type of data must all be considered when deciding which statistical analyses may be most appropriate (Cohen, Manion and Morrison, 2011; 697).

The purpose of the quasi-experimental design used within Phase One was to compare the impact of the independent variable (i.e. intervention participation) on the respective dependent variables for research questions one and two; participants' self-reported anxiety and parent-reported perceptions of student anxiety. The purpose of the statistical analysis (in answering those research questions outlined in section 2.11) was to compare group performance per condition (i.e. intervention or wait-list comparison condition) on the dependent variables measured at time 1 and time 2 (i.e. student or parent-report anxiety scores), to ascertain whether any statistically significant effects had been obtained and whether any positive outcomes may be attributable to attendance of the intervention.

A statistically significant result would be acknowledged if the probability of a 'Type I error' and the probability of the result being obtained by chance was less than 5% ( $p < 0.05$ ) (Dancey and Reidy, 2011; 141).

##### **4.2.2.2.1 Parametric Tests**

Parametric tests provide one such means of obtaining inferential statistics from which experimental conclusions may be drawn.

However, it should be noted that parametric tests make certain assumptions about the total population from which a study sample is drawn (Dancey and Reidy, 2011; 154). These assumptions relate to population characteristics or 'parameters', including:

- (i) The data used should be at least interval level;



- (ii) The data should be normally distributed (section 4.2.2.3.1);
- (iii) The variances of the population(s) should be relatively equal (section 4.2.2.3.2).

It was therefore important to undertake preliminary analyses to ensure that these assumptions were met by the data sets obtained in the current study (section 4.2.2.3).

Parametric tests are commonly used within psychological research because they provide a higher level of statistical power (ibid; 156) and a greater ability to identify a statistically significant relationship between variables, should one exist.

#### **4.2.2.2.2 Non-parametric Tests**

Conversely, non-parametric or 'distribution-free' tests do not make certain assumptions about the data collected and are therefore considered as alternative statistical analyses, which may be used when those assumptions underpinning parametric tests cannot be met (Dancey and Reidy, 2011; 528). Non-parametric tests were considered if those assumptions in section 4.2.2.3 were not met.

#### **4.2.2.3 Preliminary analyses**

It was necessary to undertake a number of preliminary analyses of the data obtained, to ascertain whether this data met those essential assumptions underpinning parametric tests. The checks undertaken are detailed below.

##### **4.2.2.3.1 Tests of normality**

Parametric tests work on the assumption that the data set is normally distributed. The Shapiro-Wilk test was used to test this assumption; a non-significant result ( $p > 0.05$ ) suggests that the data set is normally distributed, whilst a significant result ( $p < 0.05$ ) indicates that a data set is non-normally distributed (Razali and Wah, 2011; 21) and interpretations may lack reliability. If the data was non-normally distributed then non-parametric tests

were considered. Research demonstrates that the Shapiro-Wilk test is the most powerful normality test (ibid).

#### **4.2.2.3.2 Tests of Equality of Variances**

Parametric tests also assume that the variances of the populations of interest are approximately equal (Dancey and Reidy, 2011; 155). Levene's test of Equality of Variances was used for each research question, to ascertain whether the variance of anxiety scores between intervention and wait-list groups were comparable, prior to intervention or wait-list participation. If the assumption of homogeneity of variance is violated but a study boasts equal numbers of participants in each condition then parametric tests may still be employed, albeit with cautious interpretation and on the basis that the other assumptions listed were met (ibid; 156). If these conditions could not be met, then non-parametric tests were considered.

#### **4.2.2.3.3 Tests of Equality of Means**

In comparison studies, it is important to establish the extent to which the conditions are comparable, or homogenous with regards to the dependent variable, prior to the independent variable being manipulated.

Independent t-tests compare the mean performance of participants from differing conditions (Brace, Kemp and Snelgar, 2012; 120) and were used to test whether the intervention and wait-list conditions were comparable in terms of mean self-report and parent-report anxiety levels prior to the intervention phase commencing.

#### **4.2.2.3.4 Test of Sphericity**

Testing sphericity of data refers to the need to establish whether the correlations between all variables are approximately equal (Brace, Kemp and Snelgar, 2012). Tests of Sphericity are applicable to the use of an ANOVA or ANCOVA and if the within-subjects variable has more than two levels then a check for sphericity is required. As Phase One incorporates only two levels

of the within-subject variable (i.e. time of measurement; time 1 and time 2), Mauchly's Test of Sphericity is not required.

#### **4.2.2.3.5 Two-way Mixed Analysis of Variance (ANOVA)**

Where the preliminary analyses outlined in section 4.2.2.3 have not been violated, parametric testing may be used.

An ANOVA represents one type of parametric test. ANOVAs can be used to test the differences in means between several groups. The current study required a two-way mixed ANOVA design for research questions one and two in which participants contribute to only one of several between-subjects conditions (Dancey and Reidy, 2011; 299). As per section 3.7.2, the 'between-groups' independent variable (i.e. treatment exposure) had two levels for both research questions:

- (i) Student participation in the CBT-based intervention, or;
- (ii) Student attendance of timetabled lessons (wait-list comparison).

The 'within-groups' independent variable (i.e. time) also had two levels:

- (i) Pre-test (time 1), and;
- (ii) Post-test (time 2).

In addition to those significance levels stated in section 4.2.2.2, Wright (2003; 124) argues that effect sizes should also be reported, as "effect sizes tell the reader how big the effect size is" (ibid; 125). Effect sizes are therefore included for those ANOVAs conducted in the Phase One analyses.

### **4.2.3 Data included within the Phase One Analyses**

A total of 18 participants opted into the current study, and were allocated to intervention (n=8) or wait-list comparison (n=10) conditions via a matched pairs process, (section 3.10.3.2). All participants achieved 100% programme attendance and all participants provided a complete data set (i.e. time 1 and time 2 data on the SCAS).

The parents of these participants (n=18) were also contacted regarding the parental measure of student anxiety (SCAS-P), with 16 parents (88.8%) providing a complete data set of time 1 and time 2 data. These parents were equally divided between conditions (intervention condition = 8, wait-list condition = 8). The data obtained from the SCAS and SCAS-P is of an interval level of measurement.

The analyses for each research question within Phase One will now be considered.

#### 4.2.4 Research Question One

**Does secondary school-age students' self-reported anxiety reduce as a result of participating in an indicated CBT intervention programme?**

Experimental Hypothesis	Null Hypothesis	Dependent Variable
Participants in the CBT-based intervention condition will report significantly reduced anxiety between pre-test and post-test measures. These changes will not be observed in participants in the wait-list comparison group.	There will be no statistically significant difference between the self-reported anxieties of those participants in the experimental condition and those participants in the wait-list comparison condition between pre-test and post-test measures.	Participant self-report anxiety ratings on the SCAS.

**Table 4.1 – A table to show the experimental and null hypotheses for Research Question One**

##### 4.2.4.1 *Descriptive Statistics*

Table 4.2 outlines the descriptive statistics for research question one. This data is informed by pre-test and post-test data provided by students who

completed the SCAS measure. The means and standard deviations are provided for the intervention and wait-list conditions and the total sample.

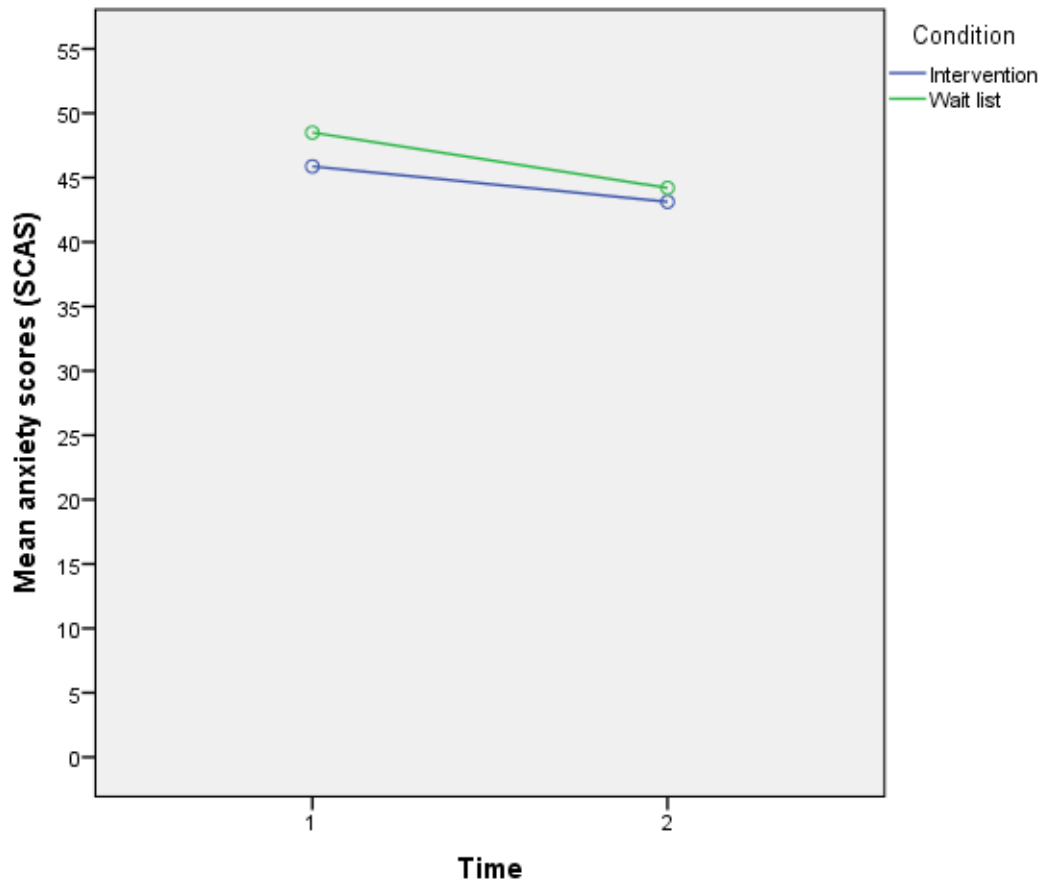
Time	Condition	N	SCAS Results	
			Mean	Standard Deviation
Time 1 (Pre-test)	Intervention condition	8	45.87	8.44
	Wait-list comparison condition	10	48.50	12.03
	Total	18	47.33	10.381
Time 2 (Post-test)	Intervention condition	8	43.13	17.08
	Wait-list comparison condition	10	44.20	18.66
	Total	18	43.72	17.46

**Table 4.2 – A table to show the descriptive statistics for Research Question One**

Observations:

- The intervention group's pre-test mean scores are lower than the wait-list group's; the same is true at post-test albeit the difference between mean anxiety scores across the two conditions appears minimal at both time 1 and time 2.

- The standard deviation scores suggest that there is a greater spread of scores in the wait-list group's pre-test scores, whilst the spread of scores is similar between the groups at post-test.



**Figure 4.1 - A graph to show the mean student-report anxiety scores for both conditions at both pre-intervention and post-intervention**

Figure 4.1 provides an initial indication that participants' mean anxiety scores decreased between time 1 and time 2 across both intervention and wait-list conditions. Participants in the wait-list comparison condition recorded slightly higher mean anxiety scores at both time 1 and time 2.

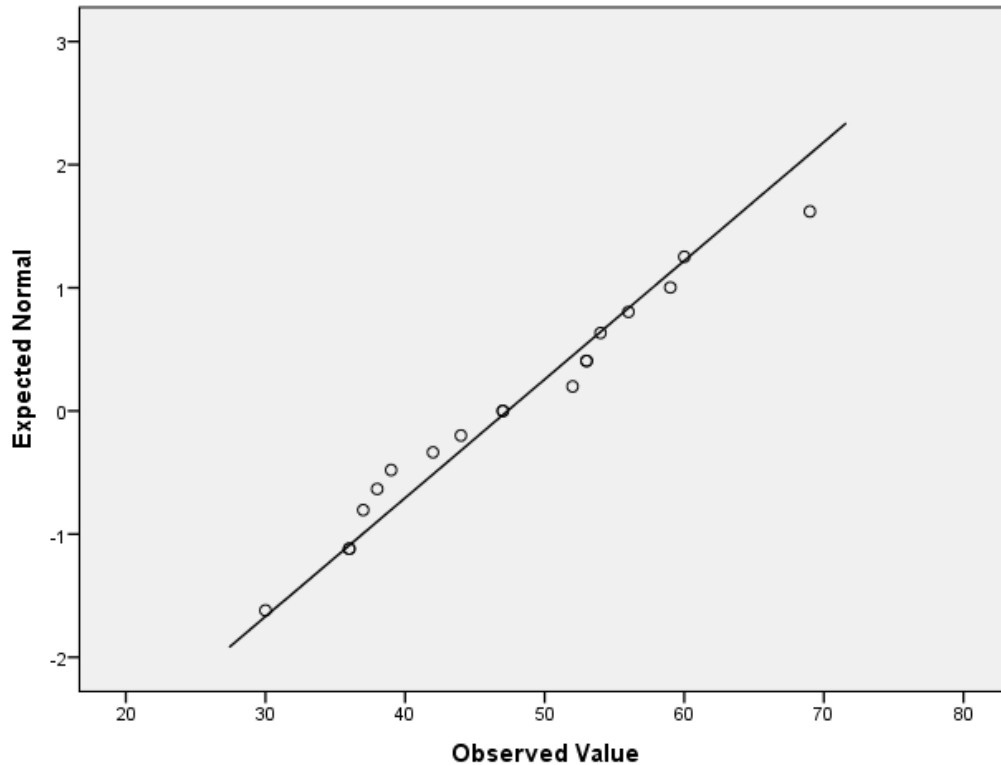
#### **4.2.4.2 Test of Normality**

The Shapiro-Wilk analysis was undertaken to explore the normality of data distribution across both conditions. The results are illustrated in Table 4.3.

Shapiro-Wilk data	Intervention condition	Wait-list condition	Total sample
Statistic	.930	.978	.968
Degrees freedom	8	10	18
Significance	.513	.953	.762

**Table 4.3 - A table to show the results of the Shapiro-Wilk test data at Time 1 for the intervention condition, wait-list condition and total sample**

These results show that the Shapiro-Wilk analysis was not statistically significant ( $p > 0.05$ ) for either the intervention, wait-list or total samples. The data can therefore be assumed to be normally distributed. Figure 4.2 represents a Q-Q plot of the distribution of the total data set across both conditions at time 1. The closer the data lies to the line, the more confidently we can say that it is normally distributed; enabling the implementation of parametric tests.



**Figure 4.2 - A Q-Q plot illustrating the distribution of student data at Time 1 within the total sample**

#### **4.2.4.3      *Test of Homogeneity of Variance***

Levene's test of Equality of Variances was used to assess the spread of scores on the dependent variable (SCAS anxiety scores) between the two conditions at time 1. The results of this analysis were not statistically significant ( $F(1,16)=1.038$ ,  $p=0.323$ ), indicating that the variability in the two conditions was not significantly different at time 1. Homogeneity of Variance between conditions enables the use of parametric tests.

#### **4.2.4.4      *Test of Equality of Means***

Independent t-tests were used to compare the mean anxiety scores for the independent groups at time 1. The results of this analysis were not statistically significant ( $t(16)=-.522$ ,  $p=.323$ ) indicating that the two conditions had comparable mean anxiety scores at time 1.



#### **4.2.4.5 Two-way Mixed ANOVA**

A two-way mixed ANOVA was used to analyse whether there was a significant interaction between the between-groups independent variable (condition) and the within-subjects factor (time) upon the dependent variable (students' self-reported anxiety).

Results indicate that the main effect of the within-subjects factor, time, was not statistically significant ( $F(1,16) = 0.971$ ,  $p = .339$ , partial  $\eta^2 = .057$ ), nor was the main effect of the between-group factor, condition ( $F(1,16) = 0.94$ ,  $p = .763$ , partial  $\eta^2 = .006$ ). The condition-by-time interaction was also not significant ( $F(1,16) = 0.47$ ,  $p = .831$ , partial  $\eta^2 = .003$ ). The results of the ANOVA are displayed in appendices 40 and 41.

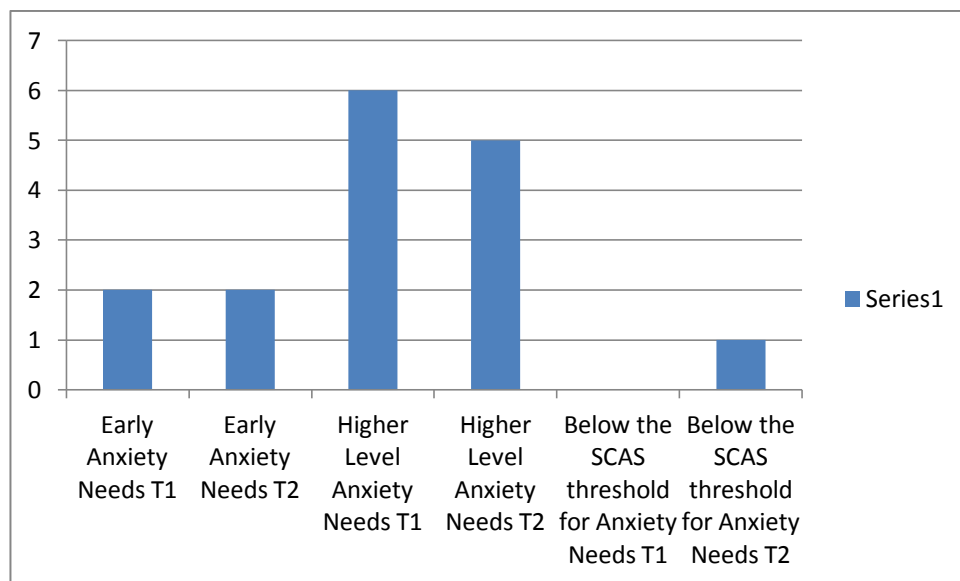
#### **4.2.4.6 Summary of Research Question One**

Whilst those trends in anxiety scores illustrated in Figure 4.1 and the descriptive statistics reported in Table 4.2 demonstrated a slight reduction in mean anxiety scores for both conditions between time 1 and time 2, the results of the mixed ANOVA suggest that there was not a statistically significant interaction between the between-groups independent variable (intervention participation) and the dependent variable (self-reported anxiety) over time ( $F(1, 16)=0.47$ ,  $p= .831$ , partial  $\eta^2= .003$ ). The condition that participants were in (intervention or wait-list comparison) did not therefore have a significant impact upon their self-reported levels of anxiety.

Consequently, the experimental hypothesis outlined in Table 3.1 must be rejected. The findings support the null hypothesis: *'There will be no statistically significant difference between the self-reported anxieties of those participants in the experimental condition and those participants in the wait-list comparison condition between pre-test and post-test measures'*.

Additionally, a number of changes are apparent when individual participants' progress is considered in terms of those 'scoring thresholds' on the SCAS (as detailed in section 3.10.3.1). Whilst these trends do not relate directly to the experimental hypothesis for question one, they do provide insight into the

fluctuations in students' needs over the course of the programme. Reflections of this nature constitute a change in epistemological stance from the nomothetic epistemology associated with Phase One of this study. Instead of analysing group performance and considering whether generalisation of findings to wider populations may be possible, the data can also be interpreted in an idiographic sense, so as to understand the implications of intervention participation for the students within the current study. Figure 4.3 demonstrates the changes in 'level of need' for participants within the intervention group at time 1 and time 2, whilst Figure 4.4 demonstrates the equivalent trends for participants within the wait-list condition.

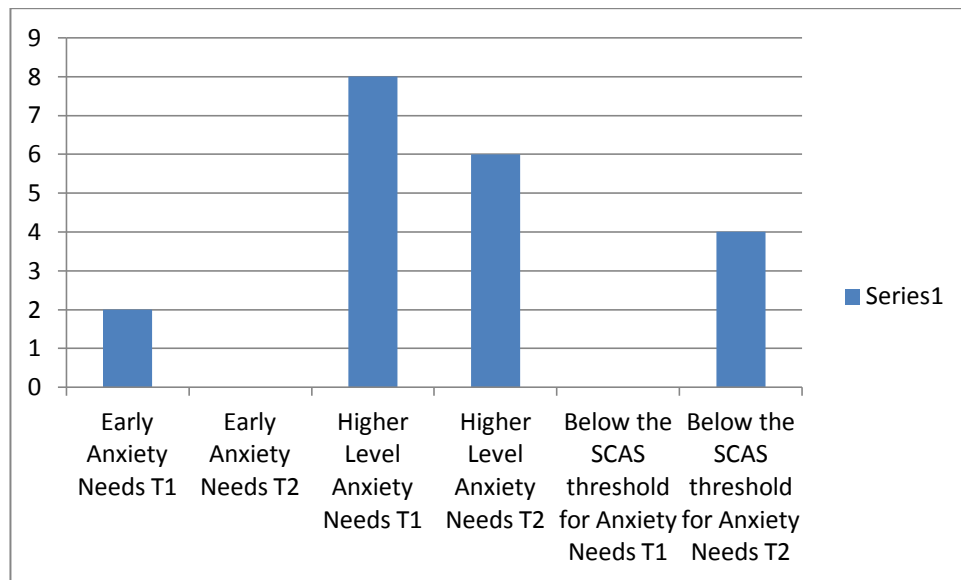


**Figure 4.3 - A graph to compare the level of self-reported anxiety amongst intervention participants between time 1 and time 2, as measured by the SCAS.**

When the data was studied, the following observations were evident:

- Four participants remained at a higher level of anxiety between time 1 and Time 2.
- Two participants moved from a higher level of anxiety to a lower level of anxiety.

- One participant moved from a lower level of anxiety to below the SCAS threshold for identification of anxiety needs.
- One participant moved from a lower level of need to a higher level of anxiety.



**Figure 4.4 - A graph to compare the level of self-reported anxiety amongst wait-list participants between time 1 and time 2, as measured by the SCAS.**

When the data was studied, the following observations were evident:

- Two participants moved from a lower level of anxiety to below the SCAS threshold for identification of anxiety needs.
- Two participants moved from a higher level of anxiety to below the SCAS threshold for identification of anxiety needs.
- Six participants remained at a higher level of anxiety between time 1 and Time 2.

Interpretations of these trends will be considered in chapter five.

#### 4.2.5 Research Question Two

**Do parents perceive student anxiety to reduce following secondary school students' participation in an indicated CBT intervention programme?**

Experimental hypothesis	Null hypothesis	Dependent Variable
Parents of participants in the CBT-based intervention condition will report significant reductions in student anxiety between pre-test and post-test measures. These changes will not be observed in parents of participants in the wait-list comparison group.	There will be no statistically significant difference between parental perceptions of student anxiety reported by parents of participants in the experimental condition and parents of participants in the wait-list comparison condition, between pre-test and post-test measures.	Parental responses on the Spence Children's Anxiety Scale for Parents.

**Table 4.4 – A table to show the Experimental and Null hypotheses for Research Question Two**

##### 4.2.5.1 *Descriptive Statistics*

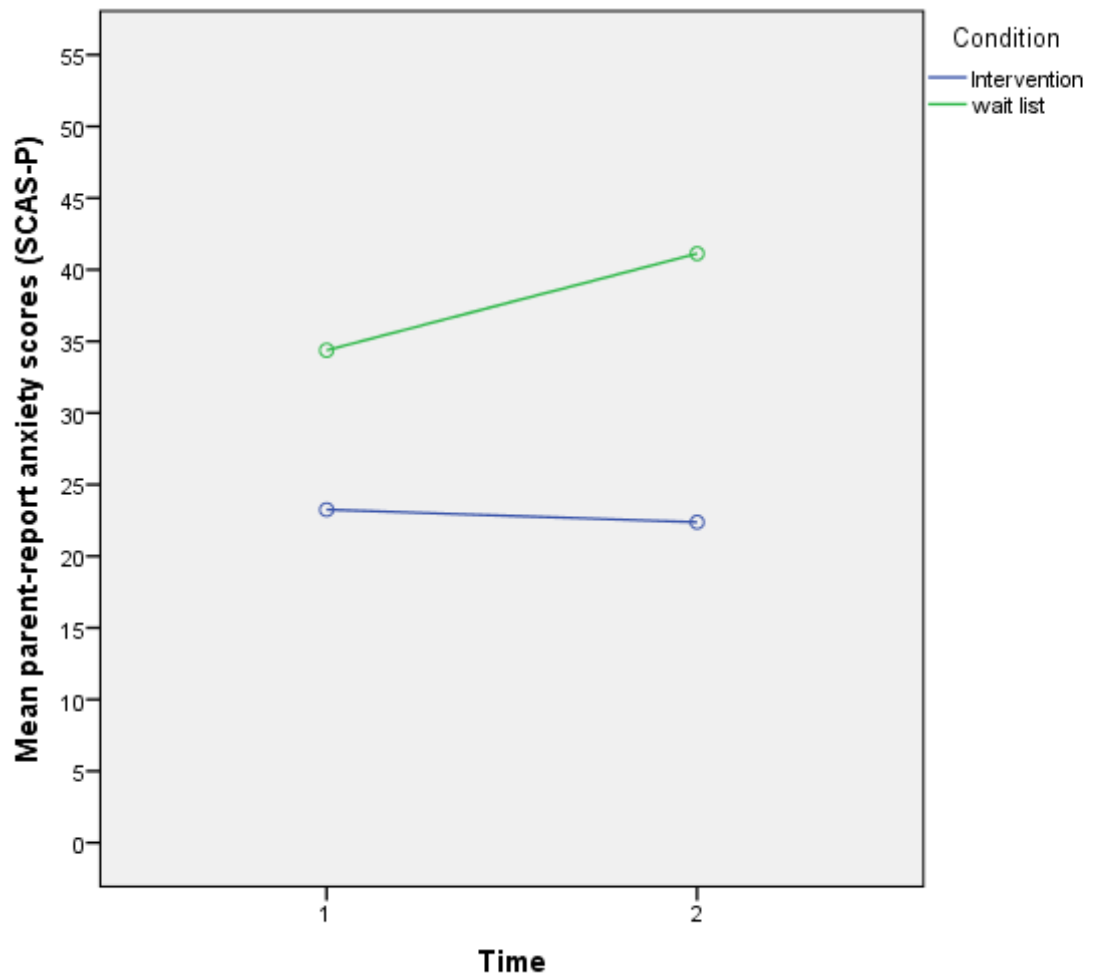
Table 4.4 outlines the descriptive statistics for research question two. This data is derived from pre-test and post-test data provided by parents' completion of the SCAS-P measure. The means and standard deviations are provided for the intervention and wait-list conditions and the total sample.

#### Observations:

- The mean anxiety score reported by parents of participants in the intervention group is lower than that reported by parents of participants in the wait-list group at time 1.
- The time 1 scores reported by intervention group parents are clustered more closely around the mean, with lower standard deviation than those scores recorded by parents in the wait-list condition.
- The intervention group demonstrated reductions in parent-reported scores of student anxiety between time 1 and time 2, suggesting that these parents perceived their children's anxiety to have reduced over the course of the intervention (Figure 4.5).
- The wait-list group demonstrated an increase in parent-reported scores of student anxiety between time 1 and time 2, suggesting that these parents perceived their children's anxiety to have increased over the course of their wait-list phase (Figure 4.5).
- The time 2 scores reported by intervention group parents are clustered more closely around the mean, with lower standard deviation than scores recorded by parents in the wait-list condition.

Time	Condition	N	SCAS-P Results	
			Mean	Standard Deviation
Time 1 (Pre-test)	Intervention condition	8	23.25	9.20
	Wait-list comparison condition	8	34.38	23.31
	Total	16	28.81	18.05
Time 2 (Post-test)	Intervention condition	8	22.37	10.25
	Wait-list comparison condition	8	41.13	25.27
	Total	16	31.75	20.99

**Table 4.5 – A table to show the descriptive statistics for Research Question Two**



**Figure 4.5 – A graph to show the mean parent-report anxiety scores for both conditions at both pre-intervention and post-intervention**

#### **4.2.5.2      *Test of Normality***

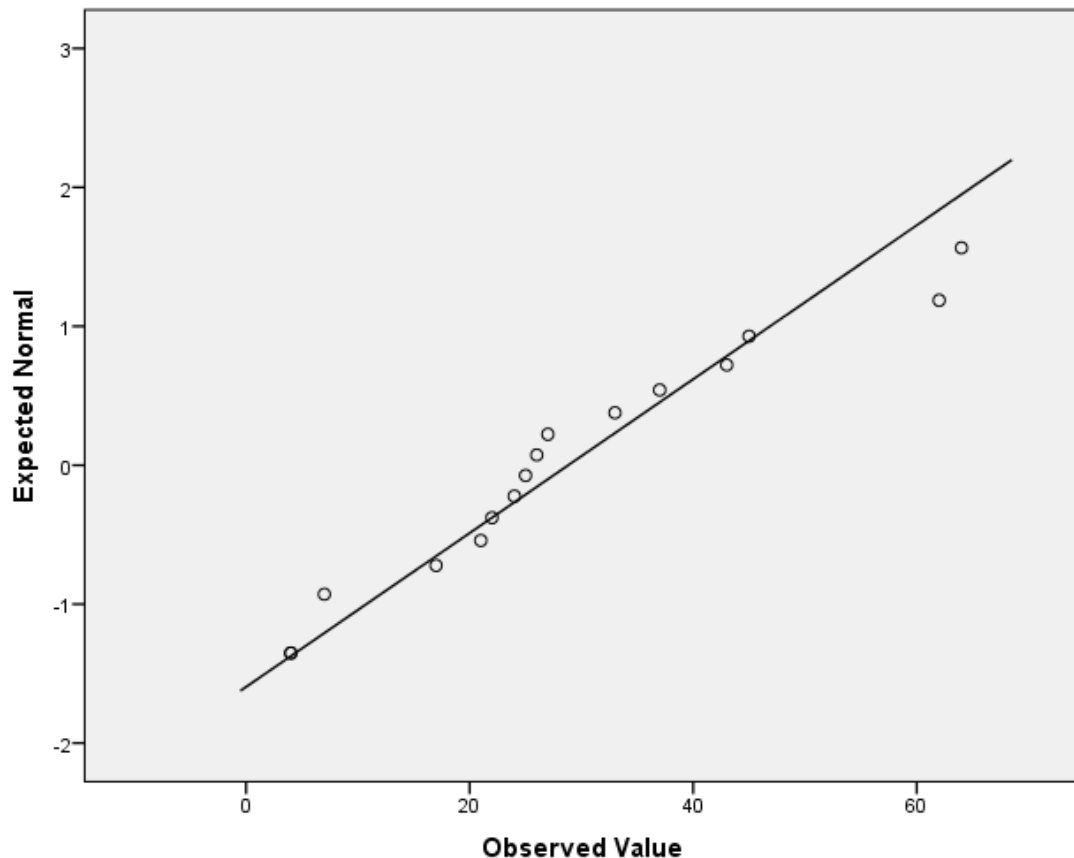
The Shapiro-Wilk analysis was undertaken to explore the normality of distribution of the data across both conditions. The results are illustrated in Table 4.6.

<b>Shapiro-Wilk data</b>	<b>Intervention condition</b>	<b>Wait-list condition</b>	<b>Total sample</b>
<b>Statistic</b>	.278	.147	.936
<b>Degrees freedom</b>	8	8	16
<b>Significance</b>	.068	.200	.304

**Table 4.6 - A table to show the results of the Shapiro-Wilk test data at Time 1 for the intervention condition, wait-list condition and total sample**

These results show that the Shapiro-Wilk analysis was not statistically significant ( $p > 0.05$ ) for either the intervention, wait-list or total samples. The data can therefore be assumed to be normally distributed. Figure 4.6 represents a Q-Q plot of the distribution of the total data set across both conditions at time 1. The closer the data lies to the line, the more confidently we can say that the data is normally distributed. Normally distributed data enables the implementation of parametric tests.





**Figure 4.6 – A Q-Q plot illustrating the distribution of parent data at Time 1 within the total sample**

#### **4.2.5.3      *Test of Homogeneity of Variance***

Levene's test of Equality of Variances was used to assess the spread of scores on the dependent variable (SCAS-P anxiety scores) between the two conditions at time 1. The results of this analysis were statistically significant ( $F(1,14)=8.354$ ,  $p=0.012$ ), indicating that equality of variances was not apparent across both conditions.

A smaller sample size, such as that within the current study, may impact upon the power of the Levene's test to detect differences between the variances (Field, 2013; 10). There was therefore a need to inspect the individual variances for each condition at time 1, with intervention variance ( $9.19^2=84.45$ ) being substantially smaller than the wait-list variance ( $23.31^2=543.41$ ), suggesting that homogeneity of variances was not apparent.

There was therefore a need to proceed with caution, as equality of variances between the conditions cannot be assumed (Cohen, Manion and Morrison, 2011; 650). Several authors state that parametric testing may still be considered when this assumption is violated, but equal sample sizes exist across conditions (Dancey and Reidy, 2011; 156; Field 2013).

#### **4.2.5.4      *Test of Equality of Means***

Independent t-tests were used to compare the mean anxiety scores for the independent groups at time 1. The results of this analysis were not statistically significant ( $t(14)=-1.256$ ,  $p=.240$ , equal variances not assumed) indicating that the two conditions were comparable in terms of mean anxiety score at time 1.

#### **4.2.5.5      *Two-way Mixed ANOVA***

A two-way mixed ANOVA was used to analyse whether there was a significant interaction between the between-groups independent variable (condition) and the within-subjects factor (time) upon the dependent variable (parent-reported scores of student anxiety).

The results of the two-way mixed ANOVA indicate that the main effect of the within-subjects factor, time, was not statistically significant ( $F(1,14) = 2.597$ ,  $p = .129$ , partial  $\eta^2 = .156$ ), nor was the main effect of the between subjects factor, condition ( $F(1,14) = 2.708$ ,  $p = .122$ , partial  $\eta^2 = .162$ ). The condition by time interaction was also not significant ( $F(1,14) = 4.374$ ,  $p = .055$ , partial  $\eta^2 = .238$ ), albeit this interaction did approach statistical significance ( $p>0.05$ ). The results of the ANOVA are presented in appendices 42 and 43.

#### **4.2.5.6      *Summary of Research Question Two***

Those trends in parent-reported student anxiety scores illustrated in Figure 4.5 and the descriptive statistics reported in Table 4.5 demonstrate a slight reduction in parent-reported anxiety scores for the intervention condition between time 1 and time 2, compared to an increase in parent-reported anxiety scores for the wait-list condition between time 1 and time 2.

These trends tentatively indicate that parents within the wait-list condition perceived their children's anxiety to increase during the wait-list phase, compared to the slight reduction in student anxieties reported by parents in the intervention condition. This is an unexpected trend and was not predicted within the initial experimental hypotheses for research question two. However, these findings must be interpreted with caution as results of the two-way mixed ANOVA suggest that this condition-by-time interaction is only approaching statistical significance and does not achieve full statistical significance ( $F(1,16) = 4.374$ ,  $p = .055$ , partial  $\eta^2 = .238$ ). Explanation of this effect will be considered in section 5.2.2.

Therefore, when the experimental hypothesis is considered; *'Parents of participants in the CBT-based intervention condition will report significant reductions in student anxiety between pre-test and post-test measures. These changes will not be observed in parents of participants in the wait-list comparison group.'* it would appear that the condition that participants were in (intervention or wait-list comparison) did not have a significant impact upon parent-reported levels of student anxiety.

Subsequently, the following null hypothesis must be accepted: *'There will be no statistically significant difference between the student anxieties reported by parents of participants in the experimental condition and parents of participants in the wait-list comparison condition between pre-test and post-test measures'.*

Further consideration of the findings from research questions one and two will take place in the discussion chapter.

#### **4.2.6 Data derived from the intervention fidelity checks**

The researcher felt that a high level of treatment fidelity was apparent within the current study, with specific fidelity ratings provided within appendices 34-37.

Far from being a summative process, the researcher perceived checks of intervention fidelity to also provide formative information for optimising future

intervention implementation. Qualitative reflections on the fidelity checks and areas for improvement of practice are therefore discussed in section 5.5.; 'reflections on the implementation of the Positive Thinking Programme'.

### 4.3 Phase Two Results

Phase Two represents an analysis of qualitative data obtained via focus groups undertaken with intervention participants.

This section aims to describe the qualitative analyses undertaken on the data obtained via the focus groups conducted within the current study. A combination of qualitative data collection methods were used within Phase Two, including a Focus Group (FG), Nominal Group Technique (NGT, Delbecq et al., 1975) and a six-phase guide to Thematic Analysis (Braun and Clarke, 2006).

#### 4.3.1 Data included within the Phase Two Analysis

Those participants from the initial intervention phase (n=8) were invited to attend the focus group session, which considered the following research focus:

***“An exploration of participants’ perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention’s contribution to this”.***

Signed parental and student consent was required for students to participate within the focus group activity (Appendices 13-14); six students (75%) received parental consent, of which four agreed to take part in the focus group. This session lasted for two hours and was conducted in school by the researcher. The following questions were considered:

1. Have you noticed any changes in how often you worry since attending the programme?
2. You have said whether you worry more often or less often since the programme. Now tell me about the size of your worries: are these bigger or smaller since the programme?
3. When you are feeling worried or anxious, what helps you to cope?
4. Have you used any different strategies for managing your worries, since you attended the programme?

5. What strategies, if any, have you found to be the most useful?
6. What did you like best about the programme?
7. What were the most useful parts of the programme?
8. What needs to change about the programme/what would make the programme better?

#### **4.3.1.1      *Data obtained via analysis of Likert scales***

Likert scales were used to obtain participant responses to questions 1 and 2.

In response to question 1 (“have you noticed any changes in how often you worry since attending the programme?”) two participants indicated that they worried with equal frequency post-intervention. Two participants indicated that they worried ‘somewhat less’ following intervention participation.

In response to question 2 (“Tell me about the size of your worries: are these bigger or smaller since the programme?”), two participants indicated that their worries were ‘somewhat smaller’ post-intervention, one participant indicated that their worries were ‘somewhat bigger’ and one participant indicated that they had experienced no change in the perceived magnitude of their worries.

#### **4.3.1.2      *Data obtained via Thematic Analysis of questions 3 to 5***

The following sections describe the steps to the Thematic Analysis undertaken for questions 3 to 5. FG discussions were tape recorded, and the audio recordings then transcribed by the researcher in order to provide the written data necessary for the Thematic Analysis. The analysis was recursive in nature, whereby “movement is back and forth as needed, throughout the phases” (Braun and Clarke, 2006; 86) in order to refine the analysis process.

##### **4.3.1.2.1      Familiarisation with the data set**

The researcher must first gain familiarity with their data set via immersing themselves within the data (Braun and Clarke, 2006; 87). This was achieved

via the researcher listening to the audio recordings, before transcribing them (appendix 26).

As this analysis sought to provide a rich description of the entire data set across the three focus group questions, some depth and complexity may be lost in favour of an analysis of the overall data set (Braun and Clarke, 2006; Boyatzis, 1998). Braun and Clarke (ibid) argue that this is often the case when exploring an under-researched area, such as participants' perceptions of the efficacious mechanisms underpinning CBT. Whilst focus group questions 3-5 represent different discussions, for the purpose of this analysis, the author considered the data obtained from these discussions collectively, in order to identify whether themes were apparent throughout the entire Phase Two transcript. After transcription, the entire data set was read several times and interesting patterns noted (appendix 27).

#### **4.3.1.2.2 Generating initial codes**

The process of generating initial codes followed. Codes represent “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon” (Boyatzis, 1998; 63).

Provisional codes were developed through repeated reading of the data set, and extracts of note were numbered on the basis of the code they potentially represented (appendix 26); all data should be coded in some respect at this stage (Braun and Clarke, 2006; 89).

These extracts were then transferred to post-it notes. Where necessary, additional information was included within these notes, to ensure that the extract made sense out of context, for example, participant C commented: “*(I would) probably (speak to) my form tutor (when worried)*”. Those extracts that contained references to more than one possible coding were coded as many times as was deemed necessary, for example participant A commented: “*Say I have a problem with my friends, I talk to myself. I try and plan out what I’m going to say*” was included under the codes ‘using coping

self-talk' and 'making a step-by-step behaviour plan'. The post-it notes were then used to enable the author to begin grouping coded extracts on a visual basis (appendix 28). Where a code began to diversify, it was necessary to subdivide this code, for example: 'self-harm' was extended into 'self-harm' and 'harming others'. A total of 15 initial codes were identified (appendix 28).

#### **4.3.1.2.3 Identifying themes within the data set**

A theme may be defined as: "something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set" (Braun and Clarke, 2006; 82).

Following coding of the data set, the researcher then began identifying salient or common themes within the data (Attride-Stirling, 2001; 392), with those codes identified in section 4.3.1.2.2 encapsulated within these themes. For example, the codes 'listening to music' and 'playing on the iPad' were combined with other such codes to create the theme 'using appropriate/taught distraction strategies'; such strategies were contemplated with the students in the intervention as a means of reducing the time that participants spent dwelling on their worries. Other codes, such as 'seeking social support' encompassed a high volume of data across a number of participants and were therefore considered to be a theme in their own right. At this stage nine themes were identified within the data (appendix 29).

The author then illustrated these themes within a graphic and noted the codes contributing to each theme (appendix 29). As part of the recursive nature of the familiarisation process, it was then necessary to revisit the data set to ascertain whether the extracts and initial codes were representative of the proposed themes.

#### **4.3.1.2.4 Reviewing the themes**

This stage required the researcher to revisit the initial themes and reconsider whether these themes remained representative of the 'overall picture' of the data, or whether some themes required some refinement. At this stage



themes may be combined or further subdivided depending upon the apparent trends within the data. For example, the 'self harm' theme was further subdivided into 'self harm' and 'recognising that self-harm does not resolve anxieties', increasing the total number of sub-themes to ten.

The researcher then sought to establish overarching themes, designed to encapsulate collections of themes within the data. An outline of associated themes, sub-themes and codes is included in appendix 30. From here, the researcher developed a Thematic Analysis network (Figure 4.7) to illustrate the themes and sub-themes identified. The support of fellow TEPs was then enlisted for inter-rater analysis of the allocation of a) initial data extracts into sub-themes and b) sub-themes into overarching themes. The purpose of these additional analyses was to assess the quality of the conclusions drawn thus far.

Five TEPs assisted with step a), with each TEP applying the initial 15 codes to a selection of 15 extracts (see appendix 39 for the inter-rater coding template). Collectively, TEPs demonstrated inter-rater agreement with the researcher's initial coding on 69 of 75 extracts (with a mean inter-rater agreement of 13.8 out of 15 codings). Two TEPs assisted with step b), with both demonstrating 100% inter-rater agreement with the researcher's initial thematic network.

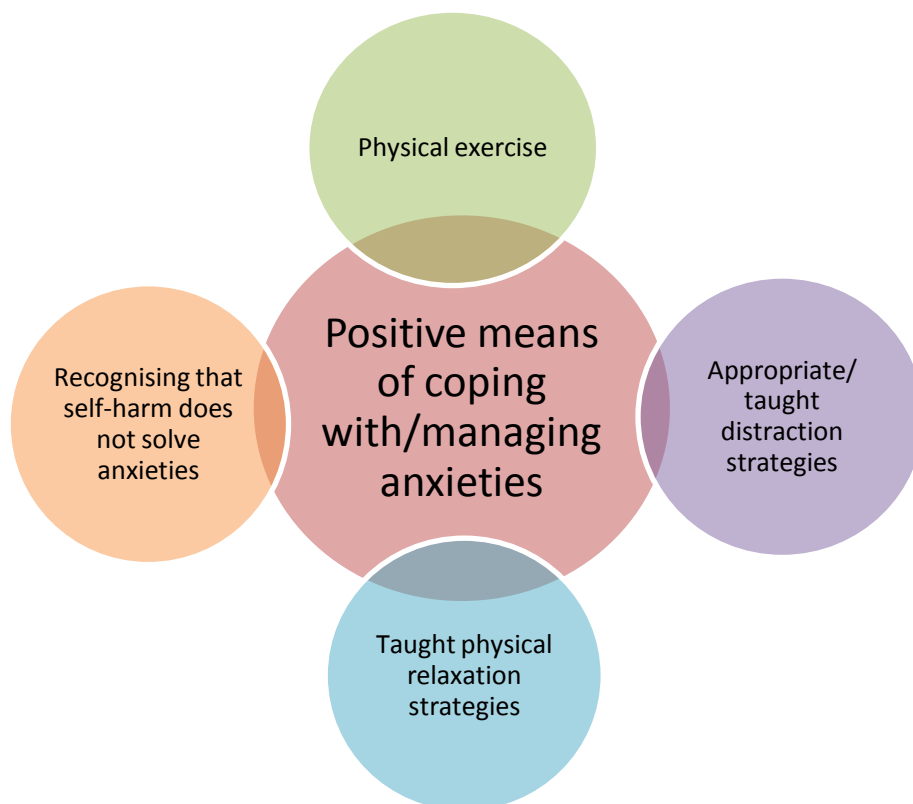
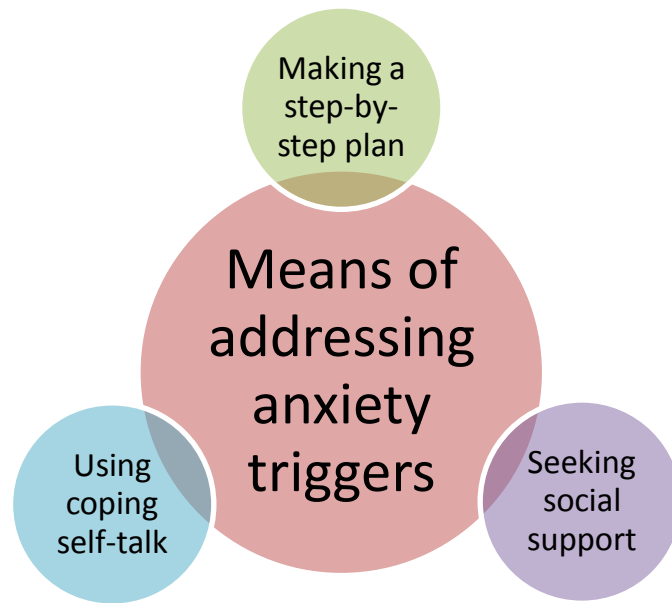
#### **4.3.1.2.5 Naming and operationalising themes**

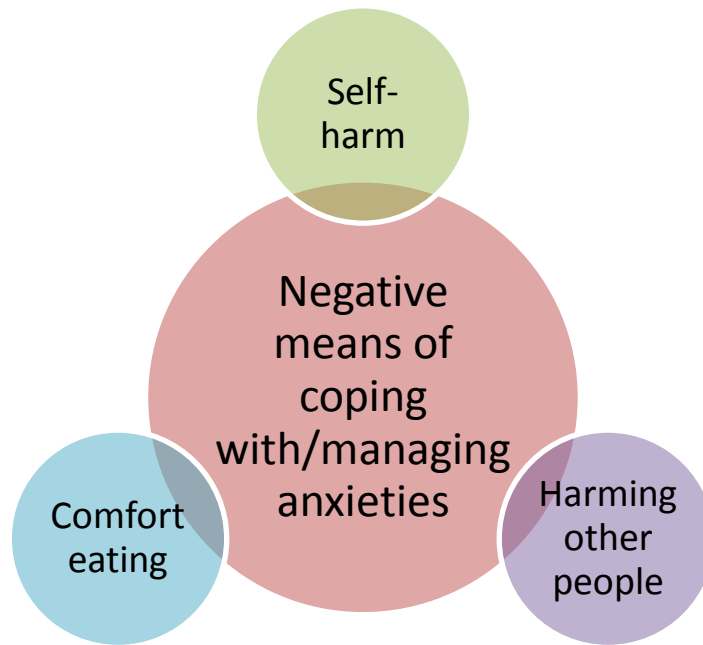
This phase seeks to operationalise each theme and provide each theme with a final label. The aim here is to articulate the 'essence of what each theme is about' (Braun and Clarke, 2006; 92) and to ensure that each theme is mutually exclusive.

Consideration should also be given to the 'keyness' of each theme i.e. the extent to which that theme contributes to the overall story of the data set and the initial research questions. The prevalence of the theme (i.e. the number of times the theme is apparent within the data) is not a sole determinant of the 'keyness' of a theme and it could be argued that establishing 'keyness' on

the basis of frequency may be misleading, given that some individual participants reiterated similar points within the entire data set, thereby increasing the prevalence of that theme. The researcher considers the prevalence of a theme in terms of the number of participants making reference to that theme, as opposed to solely acknowledging the number of times a theme is apparent within the overall data set.

In total three overarching themes were identified, encompassing a total of ten sub-themes; section 4.3.1.2.6 now outlines each theme in detail.





**Figure 4.7 - Themes identified during the Thematic Analysis process, with consideration to the research focus: “An exploration of participants’ perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention’s contribution to this”.**

#### **4.3.1.2.6 Themes identified within the current analysis**

##### Means of addressing anxiety triggers

Participants described their acquisition and increased use of a range of proactive strategies designed to address the causes of their anxiety, following intervention attendance. This theme included three sub-themes:

- Seeking social support;
- Making a step-by-step plan;
- Using coping self-talk.

In response to question five: *“Have you used any different strategies for managing your worries, since you attended the programme?”*, the majority commented that the intervention had increased their awareness of social support for addressing/managing their anxieties, post-intervention. Participant A commented: *“You speak to someone and then they could give*

*you advice”, whilst participant B commented: “The people that we were working with...’cos I never knew, I just thought that they were...just a normal teacher, but now I know that I can go up to them and talk to them”, adding “I feel now as though I can talk to more people”.*

To a lesser extent, participants commented on the benefits of learning to gradually address their anxieties via a structured step-by-step behavioural plan, following intervention participation. Whilst this sub-theme is apparent across various discussions within the FG transcript, this is a behaviourally-orientated strategy introduced within the sessions, which provided students with an understanding of the actions they could take to address their worries and therefore most likely a contribution of CBT to participants’ anxiety management skills. For example, participant A commented: *“You could think how to make it better. If you have a problem, you think what you have to do to try and solve it”*. A similar number of participants indicated that they use ‘coping self-talk’ post-intervention, as a means of encouraging themselves to persevere during times of anxiety, for example, participant B commented: *“It (self-talk) makes you feel that you have said it aloud and not just in your head. So it just makes you feel better in a way”*.

#### Positive means of coping with/managing anxieties

In contrast, the second theme encapsulated ‘positive’ means of managing/coping with anxieties. This theme and the associated sub-themes differ from the previous theme in that they represent means of containing or coping with worries, as opposed to actively seeking to address the triggers/causes of anxiety in order to reduce anxieties in future. It should be noted that the definition of these sub-themes as ‘positive’ represents the perspective of the current author and of those individuals assisting with the inter-rater evaluations of the current themes; it may be that other readers may interpret the sub-themes within this category in a different sense. This theme included four sub-themes:

- Taught physical relaxation strategies;
- Appropriate/taught distraction strategies;
- Physical exercise;

- Recognition that self-harm does not solve anxieties.

This theme demonstrates the highest prevalence, in terms of the number of data extracts referring to those sub-themes above, whilst also encapsulating the highest range of contributions from differing participants.

Many participants commented that they use physical relaxation strategies post-intervention, particularly in response to FG discussions “*Have you used any different strategies for managing your worries, since you attended the programme?*” and “*What strategies, if any, have you found to be the most useful?*”, for example, participant B commented that “*clenching your fists*” helps to temporarily relieve anxiety. This is considered an appropriate strategy following guidance from existing literature (Stallard, 2005; 137) and represents a taught strategy, introduced within the programme and is therefore considered to be a contribution of CBT to participants’ anxiety management skills. Many participants also reported the use of various appropriate/taught distraction strategies, for example participant C commented that they “*go on the iPad or something*”, whilst participant B commented that “*listening to calm music (makes you feel relaxed)*”, again these strategies prevent participants from dwelling on their worries, and were deemed appropriate following reference to existing literature (Stallard, 2005; 101).

To a lesser extent, participants indicated that they have started engaging with physical exercise as a means of managing anxiety; for example participant B commented “*things like going shopping, going swimming, things that take your mind off it but also things like physical exercise*”. The division of the theme ‘self-harm’ into ‘self harm’ and ‘recognising that self-harm does not solve anxieties’ (section 4.3.4.4) resulted in the inclusion of the latter sub-theme within this theme, as viewing self-harm as a ineffective coping strategy was considered to be a positive post-intervention outcome. Comments here included “*If you self-harm or something and when you have done it, you probably feel better that you have taken it out on yourself and not someone else. But the next day, you regret it...and feel guilty*”.

### Negative means of coping with/managing anxieties

Conversely, the third theme encapsulates participants' recognition of 'negative' coping strategies. As with the previous theme, these sub-themes represent means of containing/coping with worries, as opposed to actively seeking to address the triggers/causes of anxiety in order to reduce anxieties in future. The definition of these sub-themes as 'negative' represents the perspective of the current researcher and those individuals assisting with the inter-rater evaluations of the current themes, and other readers may have alternative interpretations of these. This theme included three sub-themes:

- Self-harm;
- Harming others;
- Comfort eating.

Many participants commented on their use of self-harm as a coping mechanism, for example, participant B commented: *"sometimes maybe you do something to yourself, harm yourself or something, if you are feeling worried"* this sub-theme was apparent across all focus group discussions, and through post-focus group safeguarding discussions with the students in question, it was identified that this strategy represented a mechanism that these students had utilised prior to intervention participation. A smaller number of participants also indicated that they may act out towards others when feeling anxious, for example participant A commented: *"I take it out on my sister and she understands and then I...feel much better if I punch her"*. A similar number of participants indicated that they may comfort eat when anxious, for example participant A commented: *"You just get something really fattening, then you eat it and then think "why did I eat that?"*.

### The overall story

A Thematic Analysis of participants' feedback regarding their attendance of a CBT-based intervention has provided insight into their perceptions of their anxiety regulation skills post-intervention, and the manner in which the intervention contributed to these skills. Four participants contributed to Phase Two of this study.

Participants' feedback indicates that CBT-based support has aided their development/acquisition of key skills designed to actively address their anxiety triggers; 'seeking social support' and 'making a step-by-step plan' were key sub-themes in this respect.

Participants also indicated that intervention attendance had provided them with the opportunity to consider positive anxiety management/coping strategies. This theme encapsulated participants' views regarding their acquisition and development of a number of strategies which may alleviate the emotional, physiological and cognitive effects of anxiety (i.e. 'Physical exercise', 'Taught physical relaxation strategies' and 'Appropriate/taught distraction strategies' respectively), albeit these strategies do not directly address those triggers leading to their anxieties and therefore may not reduce the occurrence of anxieties in future.

The third and final theme; 'negative means of coping with/managing anxieties', highlighted that participants continued to undertake some less advisable strategies as a response to their anxieties (i.e. 'comfort eating', 'self-harm' and 'harming others').

This analysis also highlighted that some contradictions exist between themes and sub-themes within data set (appendix 30). Firstly, as previously alluded to, participants may employ an array of coping strategies post-intervention, some of which may address the causes of anxiety in order to reduce future anxieties, whilst other strategies may merely provide containment or respite from the impacts of anxiety.

Contradictions also exist between sub-themes. For example, some participants indicated that they may turn to others for social support and advice, yet some of these same participants acknowledge that they may take their anxieties out on these same parties (e.g. family members). Similarly, some participants acknowledged that they have previously or recently self-harmed as a result of feeling anxious, whilst some of these same participants also questioned the appropriateness/helpfulness of self-harm as a response to anxiety.



#### **4.3.1.3      *Data obtained via Nominal Group Technique***

The NGT approach provided a structured process for identifying key themes in response to items 6 to 8, within the context of the focus group session. Themes are discussed, operationalised and agreed with participants, prior to participants voting for those themes that they consider to best represent their views to a given question (de Ruyter, 1996; 45).

For question 6; “What did you like best about the programme?” a total of 10 themes were identified (appendix 31). The most popular responses in descending order were:

1. “Sharing worries and good things with the group”
2. “Getting to know the teachers that you’re working with, so you can trust and talk to them”
3. “Trusting your teachers”
4. “I liked having one of my friends in my group, I felt more confident and had someone to back me up”
5. “Meeting people who have the same worries as you” and “Talking to new people in our year group” received an equal number of votes.

Observations:

- Themes 1 and 5 suggest that students valued the opportunity to share experiences with their peers. Theme 1 in particular indicates that students valued the chance to share their current worries and pleasant experiences with the group. Theme 5 suggests that students took reassurance from sharing an intervention with others who had similar worries.
- Theme 2 is an integral part of the programme and relates to the need for students to establish rapport and trust with the TAs; aided by the development of ground rules within the groups.
- Through discussion with the students, it was established that Theme 3 differed from Theme 2, in that the latter represented developing rapport with TAs with whom the students had not previously worked, whereas the

former represented having familiar TAs delivering the sessions, with which trust was already established.

- Theme 4, in line with Theme 5, conveys students' appreciation of 'social networking' and having the opportunity to consider their social circles and who they may turn to for social support for managing anxieties; a key concept within the intervention sessions.

For question 7; "What were the most useful parts of the programme?" a total of 15 themes were identified (appendix 32). The most popular responses in descending order were:

1. "Learning relaxation activities"
2. "Talking to teachers about your worries"
3. "Having the sheets and booklets to take home, so we can do them in our own time"
4. "Thinking about the physical exercises that I could do"
5. "Having a laugh".

Observations:

- Theme 2 suggests that students found social support and problem-solving with the group leaders to be a useful aspect of the programme.
- Theme 3 reflects students' views of the usefulness of being able to revisit and rehearse the strategies and input discussed within the session, in their own time, outside of the sessions.
- Theme 4 represents a strategy for reducing the physiological effects associated with anxiety, and a distraction technique designed to encourage participants to 'spend less time' on worries.

For question 8; "What needs to change about the programme/what would make the programme better?" a total of 15 themes were identified (appendix 33). The most popular responses in descending order were:

1. "Have the option to do more sessions after the programme ends, with anyone from your group who may also want to carry on"
2. "If we played more games"

3. "Doing craft and making things, to help you remember the things we've talked about. We could make booklets about the key facts about worries"
4. "Have sessions that last for a double lesson and don't ask students to leave the second half of a double lesson to go to the group"
5. "Having more of my friends in the group" and "Discussing someone's problem as a group, planning out what to do next and typing it up, so we all have a copy to learn from" received an equal number of votes.

Observations:

- Theme 1 suggests that students may have welcomed the opportunity for on-going support on an indicated basis, reflecting the possible need for a longer intervention programme.
- Through discussion with participants, Theme 2 related to the use of games for rapport building purposes in the initial stages of the programme, as some young people were in groups with unfamiliar peers. Extending the programme duration may enable the inclusion of additional rapport-building exercises.
- Theme 3 suggests that the opportunity to research anxiety and anxiety management strategies would improve the intervention, through providing students with the opportunity to take greater ownership of their intervention.
- Theme 4 reflects practical considerations relating to timetabling issues and students' desire for each session to be longer in duration.
- Those themes that obtained an equal number of votes for theme 5 represent the students' desire for increased social support within the group via a) carefully selecting programme groups so that students may enter the intervention with a friend, where possible and b) providing greater opportunities for collaborative problem-solving around students' current worries.

#### 4.3.2 Summary of Phase Two

Phase Two analysed qualitative data relating to participants' perceptions of their post-intervention anxiety management abilities and the contribution of CBT to these abilities.

Thematic Analysis of FG data highlighted three overarching, contrasting themes; 'means of addressing anxiety triggers', 'positive means of coping with/managing anxieties' and 'negative means of coping with/managing anxieties'; suggesting that participants developed ways of both addressing the roots of their anxieties *and* managing the impacts of anxiety, following CBT participation. When the coded extracts from the initial transcript are studied, a number of sub-themes are apparent in response to the question *"Have you used any different strategies for managing your worries, since you attended the programme?"*, including 'seeking social support' and 'taught physical relaxation strategies' whilst several sub-themes are also apparent in response to the question: *"What strategies, if any, have you found to be the most useful?"*, including 'making a step-by-step plan' for addressing the roots of participants' anxieties.

A number of subthemes representing negative coping mechanisms were also apparent (namely 'self-harm') suggesting that whilst participants acquired a number of appropriate means for addressing/managing their anxieties, some participants may continue to require support with considering appropriate strategies, post-intervention.

NGT data provided themes which corroborate those sub-themes identified during Thematic Analysis suggesting that CBT provided participants with appropriate means of addressing and managing their anxieties. NGT also identified additional themes which are of interest to the researcher as a CBT-based practitioner, such as; 'Sharing worries and good things with the group' and 'Getting to know the teachers that you're working with, so you can trust and talk to them'; suggesting that CBT participation may produce a sense of group attachment/belonging for some participants, and *"Having the sheets and booklets to take home, so we can do them in our own time"*; suggesting

that participants valued the opportunity for independent generalisation and rehearsal of session contents. These points will be reviewed further within the next chapter.

# Discussion

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## 5. Discussion

### 5.1 Introduction

This chapter considers the implications of the findings derived from Phases One and Two of the study. The findings relating to each research question are considered, with reference to the literature reviewed in chapter two and the underpinning rationale for the study.

Secondly, a critique is undertaken of the methodology used within the study, and the possible implications upon the findings obtained are considered. Finally, the implications of the study for future research and practice are discussed and conclusions presented.

This study utilised a mixed methods design, incorporating a quantitative phase (Phase One) and a qualitative phase (Phase Two) to investigate the impact of an indicated CBT-based intervention on the anxieties of secondary school students. Research Questions One and Two considered quantitative evaluation of the impact of the intervention on self-reported anxiety and parental-reported perceptions of student anxiety, whilst Phase Two entailed qualitative exploration of participants' perceived utility of this intervention.

### 5.2 Phase One Reflections

#### 5.2.1 Research Question One

***Does secondary school-age students' self-reported anxiety reduce as a result of participating in an indicated CBT intervention programme?***

The experimental hypothesis for Research Question One appeared to have face validity, given the literature reviewed in chapter two, with previous studies illustrating that CBT-based group-orientated interventions can produce positive outcomes for anxious participants from broader age-ranges (Mifsud and Rapee, 2005; Dadds et al., 1997; Stallard, 2005; 2008; Muris et

al., 2009; Rice, 2008; Muris et al., 2002; Chiu et al., 2013; Miller et al., 2011; Bernstein et al., 2005), higher levels of need (Kendall, 1994; Wood, 2006; King et al., 1998; Silverman et al., 1999) or differing regions (Muris et al., 2002; Chiu et al., 2013, Bernstein et al., 2005). This study sought to build upon this evidence base, by investigating the efficacy of an indicated CBT-based intervention when implemented in a mainstream educational setting with a UK-based sample of secondary-age students experiencing anxiety.

Results from this study found no statistically significant effects of this indicated CBT-based intervention on the self-reported anxiety of secondary school students. Participants within the intervention condition did not experience statistically significant reductions in their anxiety post-intervention, compared to wait-list comparison participants who attended their usual timetabled lessons.

The increased deviation of scores within the intervention group at time 2 suggests that whilst some students recorded notably reduced self-report anxiety scores, others intervention participants recorded increased anxiety scores, suggesting that they were only just becoming sensitised to their worries and the need to manage these effectively, by the end of the programme.

Whilst a statistically significant improvement may not be apparent for the intervention condition, it is possible that these results may be influenced by a number of factors. First, it is possible that an indicated CBT-based intervention may not reduce student anxiety, when implemented over seven sessions within a secondary school context.

Second, this study had to fit within the timescales of a school's academic timetable, meaning session durations were limited to one hour lessons and the programme ran for six weeks in total. These timetabling considerations and the need to conclude the study in line with the researcher's doctoral training timescales meant that a longer-term intervention was not possible but may be required in order to reduce students' anxiety. Similarly, timescale issues precluded a time 3 (follow-up) measure, as was initially intended in

light of the conclusions drawn by Neil and Christensen (2009); which had suggested that time 3 measures may illustrate gradual reductions in participant anxiety over time, as may have been the case within the current study. The lack of a time 3 measure could be considered to be a limitation of the current study; limitations are discussed further in section 5.4.1.

Third, it is possible that the wait-list intervention group received some 'diffusion of treatments' effects between time 1 and 2, owing to the fact that the intervention and wait-list participants were in the same year group of the same school.

Fourth, it is possible that wait-list participants received some comfort or emotional containment from knowing that their intervention attendance was due to commence once the intervention phase had concluded, thus reassuring them that their needs were to be supported, thereby reducing their anxiety scores at time 2.

Fifth, it is plausible that by simply asking all participants to complete self-report measures at time 1, these individuals then become sensitised to the nature of the intervention, thereby increasing all participants' self-awareness of their worries and prompting participants across both conditions to consider strategies for managing them. This may partly explain the reduction in anxiety scores reported by all participants at time 2.

These results prompt contemplation of a 'dose-response' interaction, that is; what quantity of indicated CBT-based support may be required for positive outcomes and anxiety reduction to become apparent for the majority of intervention participants? Indeed, some evidence has indicated that positive outcomes may be apparent in group interventions consisting of 7 sessions (Muris et al., 2002; Muris et al., 2009), yet in many studies the number of sessions provided is more than this.



#### **5.2.1.1      *The impact of indicated CBT-based interventions on student anxiety in pre-existing research***

The systematic literature review (Section 2.9) analysed previous investigations into the efficacy of indicated CBT programmes for intervening early with anxieties experienced by school students, the findings of which can now be compared with those of the current research.

Muris et al. (2009) demonstrated that indicated CBT support can lead to reductions in anxiety symptoms and negative automatic thoughts and an increase in perceived abilities to manage anxieties, although the absence of a control group limits the extent to which these trends may be attributed to intervention input. The current study included a comparison condition in attempt to improve on Muris et al.'s research design and findings illustrate that participants across both conditions experienced marginal reductions in self-reported anxiety.

In contrast to this study, many previous studies including control/comparison groups have demonstrated statistically significant reductions to anxiety in intervention participants, and important factors regarding these contrasts will now be discussed. Consideration should be given to a dose-response relationship between CBT input and anxiety reductions. Muris et al. (2002) utilised a longer intervention period (twelve sessions), whilst Rice (2008) implemented a longer programme (16 sessions) delivered more frequently than the current intervention (i.e. twice weekly).

Two studies also prompted reconsideration of the professional expertise required to produce positive intervention outcomes, given the prominent involvement of psychologists. Chiu et al. (2013) demonstrated reductions in student anxiety on self-report measures and diagnostic interviews, following a longer programme (16 sessions). In contrast to the current study, intervention sessions were delivered by a mental health practitioner comparable to a Clinical Psychologist, providing specialist expertise in the area of CBT. Rodgers and Dunsmuir (2013) also demonstrated significant reductions in self-reported anxiety for intervention participants at both post-intervention and four months follow-up. Similarly, their intervention was

longer in duration (10 sessions) and delivered by the lead author; a Chartered Educational Psychologist).

Conversely, Miller et al. (2011) failed to demonstrate any intervention effects between CBT and control participants at post-intervention or one-year follow up. The findings noted in this study are therefore comparable to those of the current study. However, Miller et al.'s use of a 'comparison' rather than 'control' condition should be considered, with the authors concluding that the influence of adult attention within the comparison condition may have led to some progress from these group participants, thereby limiting the amount of statistically significant progress between intervention and comparison conditions.

Therefore, whilst the evidence base for indicated CBT programmes provides initial support for CBT approaches delivered in this manner, the evidence base is far from extensive, and some findings have limited generalisability to UK populations. Of those studies reviewed, only one (Miller et al., 2011) enlisted the support of school personnel for programme delivery and those findings which provide initial support for the use of indicated CBT interventions are largely based upon programmes implemented by psychologists and doctoral students. Whilst the current study did not demonstrate significantly greater reductions in student anxiety for participants within the intervention condition, this research represents one investigation into the efficacy of an indicated intervention, with a UK-based secondary school population. Furthermore, limited experimental effects may be partly due to those methodological factors previously discussed in section 5.2.1.

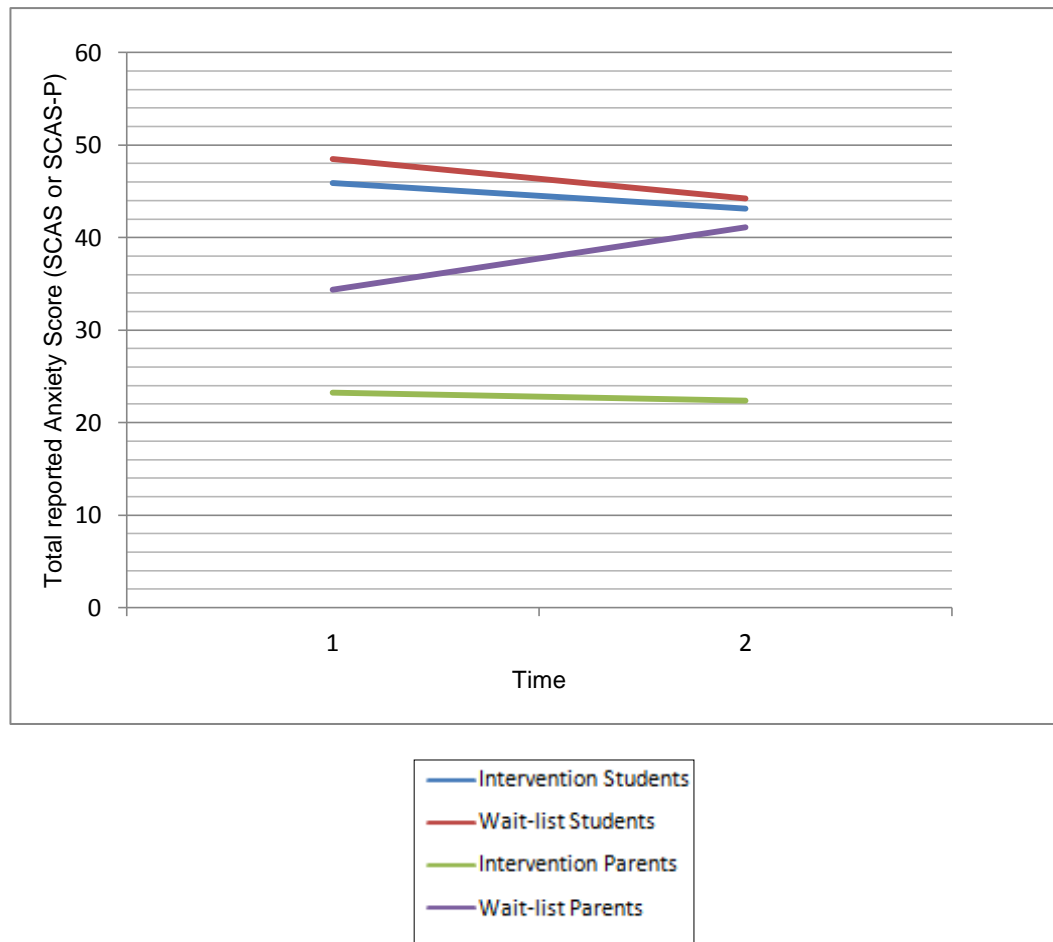
### 5.2.2 Research Question Two

***Do parents perceive student anxiety to reduce following secondary school students' participation in an indicated CBT intervention programme?***

The literature reviewed in the systematic review (section 2.9) demonstrated that parent perceptions of participants' anxiety may reduce during an indicated CBT intervention (e.g. Rodgers and Dunsmuir, 2013), albeit the number of studies investigating the impact of indicated CBT intervention on parental accounts of children and young people's anxiety was small (n=3) and there was a need, therefore, to ascertain whether parental perceptions of students' anxiety altered during the current investigation of an indicated CBT-based intervention with a UK-based secondary school sample.

Results from this study revealed no statistically significant effects of an indicated CBT-based intervention on parental perceptions of students' anxiety. However, it is not certain whether the lack of significance may be due to there being 'no effect', or due to methodological limitations such as a limited number of parental respondents or the lack of a follow-up measure (as with Miller et al., 2011a). Methodological limitations are discussed in section 5.4.1.

The wait-list group demonstrated an increase in parent-reported scores of student anxiety between time 1 and time 2, suggesting that these parents perceived their children's anxiety to have increased over the course of the wait-list phase (Figure 4.5). This is an unexpected trend and was not reflected within the initial experimental hypothesis. When this trend is compared to student reported anxiety, there is a notable contrast, and this is a point for discussion (see Figure 5.1).



**Figure 5.1 – A graph to show the comparison in student-report and parent-report anxiety scores for both conditions at pre-intervention and post-intervention**

Figure 5.1 illustrates that a marginal decreased was observed in the anxiety reported by wait-list and intervention students, and by parents of intervention students between times 1 and 2. The unexpected increase in anxiety scores reported by parents of wait-list participants, and the contrast between this trend and the self-report scores of wait-list participants may potentially be explained in terms of the nature of the wait-list condition. As wait-list students attended the school context within which the intervention was situated on a daily basis, it is possible that they received some emotional containment from knowing that their peers were attending the intervention and that they would do so in due course. However, parents of wait-list participants have less direct access to the school context and may perceive their children as being ‘identified’ as potentially experiencing anxiety but without any immediate intervention support, therefore increasing their

concerns. Through completing the time 1 measures, parents may become sensitised to the nature of the study and wait-list parents may become hypersensitive to possible anxiety symptomatology demonstrated by their children prior to commencement of intervention support. Whilst the contrast in parent-report anxiety scores across conditions is not statistically significant, this trend approached significance ( $F(1,16) = 4.374$ ,  $p = .055$ , partial  $\eta^2 = .238$ ), prompting tentative conclusions that student attendance of the Positive Thinking Programme may have provided some reassurance and emotional containment for parents of attendees. The potential for additional stress for parents of wait-list participants represents an ethical challenge of the current research (BPS, 2010; 13) and is discussed further in section 5.6; 'Ethical considerations'.

This parental data will now inform discussion in section 5.2.2.1.

#### **5.2.2.1      *The impact of indicated CBT-based interventions on parental accounts of student anxiety in pre-existing research***

Whilst only three (37.5%) of those studies identified within the systematic review (section 2.9) investigated the impact of CBT support upon parental perceptions of students' anxiety, each reported significant reductions in parental perceptions of student anxiety, compared to parents of wait-list participants. The findings of previous studies therefore contrast with the findings of the current study and important factors regarding these contrasts are now considered.

As discussed in section 5.2.1.1, both Rice (2008) and Rodgers and Dunsmuir (2013) utilised longer interventions (16 and 10 sessions respectively) with Rice (2008) delivering intervention sessions more frequently than the current intervention (i.e. twice weekly). It is possible therefore; that a higher level of intervention contact may reduce students' anxiety, leading to reductions in parent-reported perceptions of student anxiety. Similarly, Chiu et al (2013) provided a longer intervention (16 sessions), but combined with parental support for managing young people's anxiety. It is plausible therefore that the decrease in parent-reported anxiety levels reported by Chiu et al. may be

due to parental training; a) enabling participants to receive additional support within the home context, and/or b) increasing parents' self-confidence with managing their children's anxieties.

Whilst the current findings contradict parent-report data from those previous studies cited (Rodgers and Dunsmuir, 2013; Chiu et al., 2013; Rice, 2008), methodological limitations within the current study (e.g. parental response rate and sample size) limit the certainty with which conclusions may be drawn from the current parental data. The limitations of this study, combined with a paucity of parent-report data within studies of indicated CBT interventions, means that further research is needed into whether indicated CBT-based interventions may address parental perceptions of young people's anxieties.

### **5.2.3 Summary of Phase One findings**

The findings from research questions one and two demonstrated that there were no statistically significant intervention effects upon students' self-reported anxiety and parent-reported perceptions of students' anxiety. Possible interpretations of the trends apparent within the data obtained have been provided and comparisons with pre-existing research data have been made. Section 5.3 will now consider the qualitative data obtained during Phase Two of the study.

## **5.3 Phase Two reflections**

The majority of CBT-based research to date has been primarily outcome-orientated, with fewer investigations designed to ascertain which CBT mechanisms may be the most efficacious for providing positive outcomes for participants.

Phase Two was not therefore concerned with post-positivist investigations of causal effects, but instead represents an exploration of those mechanisms underpinning CBT-based intervention support and the implications of CBT on participants' perceptions of their anxiety regulation abilities. To the

researcher's knowledge, few studies have conducted an exploration of this nature with an equivalent sample to that included within the current study. Phase Two therefore comprised an exploration of participants' perceptions of their anxiety regulation abilities, post-intervention, under the research focus:

***“An exploration of participants’ perceptions of their anxiety regulation, post CBT-based intervention, and their view of the CBT-based intervention’s contribution to this”.***

The following sections will now consider the conclusions drawn from the data derived from these approaches.

### **5.3.1 Reflections upon data obtained from the Likert scale items**

The lack of clear trends within the subjective data derived from Likert scale questions 1 and 2 (regarding participants' post-intervention perceptions of the frequency and magnitude of their anxieties) is comparable to the limited clarity apparent within the self-report data obtained from both intervention and wait-list participants during Phase One. As previously discussed, it was evident that some intervention participants recorded notably reduced self-report anxiety scores at time 2, whilst others recorded notably increased anxiety scores in the same period, indicating that some students were only just becoming sensitised to their worries and the need to manage these effectively, by the end of the programme. The spread of scores obtained from the Likert scales provide further support to this conclusion.

### **5.3.2 Reflections upon data obtained from the Focus Group**

Figure 2.4 and Figure 2.6 illustrate that the CBT theoretical model of assessment and intervention takes into account emotional, cognitive, physiological and behavioural factors when seeking to intervene with mental health needs. Thematic Analysis of focus group data illustrated the ways in which participants' perceived these factors to contribute to CBT approaches, as potential 'mechanisms of change' for addressing anxiety.

Participants indicated that CBT helped them to acquire or develop several skills which may serve to address their anxiety triggers, in order to reduce the occurrence of anxieties in future. Examples include: a) undertaking 'coping self-talk'; a cognitive strategy designed to increase students' self-confidence and perseverance during anxiety-invoking situations, and b) developing step-by-step behavioural plans; a behavioural strategy in which individuals seek to address anxiety-invoking circumstances by gradually increasing their exposure to the stimuli of concern.

Given that all participants indicated that they felt intervention attendance had increased their social support networks, this would suggest that 'developing social networks' may be an important component of CBT support (as evidenced by NGT themes including: "*Sharing worries and good things with the group*", "*Meeting people who have the same worries as you*", "*Talking to new people in our year group*" and "*Getting to know the teachers that you're working with, so you can trust and talk to them*"). These themes indicate that participants valued the opportunity to develop a sense of group membership/attachment and that CBT may develop participants' sense of belong, enabling them to confide in intervention attendees and/or intervention leaders. These findings are consistent with previous literature, with a meta-analysis of Social and Emotional Learning interventions (Durlak et al., 2011) underlining the importance of "caring teacher–student relationships that foster commitment and bonding to school" (ibid; 418).

These findings are also consistent with those of existing small-scale research. Eisen and Silverman (1993) presented experimental findings which suggested that gradual exposure to anxiety-provoking situations may be a key element of CBT, whilst Maric et al. (2013) presented findings which tentatively suggest the need for CBT programmes to incorporate activities which increase participants' coping self-efficacy. Participants within the current study valued the introduction of 'coping self talk' and other similar cognitive strategies, and the opportunity to seek appropriate opportunities for social support, advice and reassurance, which may all serve to increase individuals' coping self-efficacy. Similarly, Muris et al. (2009) presented



findings which highlight the potential importance of addressing participants' negative automatic thoughts and increasing their perceived ability to cope with anxiety, in order to produce positive outcomes following CBT support.

When these findings from previous research are considered alongside the trends apparent within the current study, the evidence suggests that strategies and activities which serve to; a) enable participants to directly address their anxieties by subdividing anxieties into manageable steps, and b) optimise participants' self-confidence with addressing anxieties (such as coping self-talk), form an integral part of anxiety interventions.

A small number of contradictions were also apparent within the Thematic Analysis data, with the primary contradiction being between the types of anxiety management skills participants acquired/utilised, following intervention participation. Whilst the previous theme indicated that participants use strategies designed to actively address the root of their anxieties following intervention, the remaining two overarching themes indicated that these same participants also employed coping strategies which may alleviate or manage the impacts of anxiety, without actively addressing the causes of these worries, for example using 'appropriate/taught distraction strategies'.

Whilst coping mechanisms may provide individuals with temporary respite from the impacts of anxieties, a number of participants within the current study indicated that they have utilised 'negative' coping mechanisms at some stage. Some reported 'comfort eating', 'self-harm' and 'harming others', all of which are behaviourally-orientated strategies, with the potential for causing additional harm to participants. In line with previous research (Slee, 2007), these findings suggest that some participants may require continued support with developing their repertoire of appropriate coping strategies post-intervention, to ensure that they are aware of a range of more appropriate alternative coping mechanisms, which may successfully alleviate the effects of anxiety without the potential for causing further harm.

In contrast, participants also indicated that intervention had provided them with an insight into a range of 'positive strategies for coping with/managing anxieties'. Thematic data indicated that participants furthered their knowledge of 'physical relaxation' strategies introduced within the programme. These are designed to provide participants with respite from the physiological effects of anxiety and brief distraction from those cognitions which may be prompting anxieties. Brief relaxation strategies were popular amongst participants, primarily due to their discreet nature and because they can be applied within a variety of contexts. Developing skills in affective management is considered to be an integral part of anxiety management by key authors, as evidenced by figure 1.6 (Stallard, 2005; 8). Since all participants noted using a range of 'appropriate or taught distraction strategies' post-intervention, some inferences can be drawn, regarding the role of CBT-based support in increasing student awareness of appropriate means of addressing the physiological impacts of anxiety (Slee, 2007), with increased use of physical exercise and relaxation shown to address anxiety symptomatology (Ströhle, 2008).

Participants also appeared to contemplate other behavioural changes post-intervention. Given that those participants who had admitted previously using self-harm when anxious had also begun to question the usefulness of self-harm as a coping mechanism post-intervention (as reported under the sub-theme 'recognising that self-harm does not resolve anxieties'), some inferences can be made regarding the role of CBT in supporting participants to developing their repertoire of coping mechanisms and consider more appropriate coping strategies. These findings are consistent with existing research into the use of CBT with self-harm (Slee, 2007) which demonstrated that participants' who had previously engaged with self-harm; a) increased their problem-solving skills during CBT support, b) were encouraged to use new coping strategies and c) increased their coping self-efficacy through reflecting on effective strategies which they already used.

The ethical implications of the self-harm disclosures in the current research are discussed further in the ethical considerations section (5.6).

The current study therefore found that participants may develop their anxiety regulation skills post CBT-based intervention, through the acquisition or increased utility of key skills designed to either address and/or manage anxieties, albeit some strategies may be of a negative nature. These contradictions lead this researcher to conclude that through a CBT-based intervention, participants may begin to reflect upon the range of coping mechanisms at their disposal and may consider/compare their relative efficacies. It could be argued that these participants require continued support to consider these choices if they are to make substantial, sustained progress with managing anxieties in the long-term. Indeed, it may be that the Positive Thinking Programme represents the first period of such reflection for many participants, albeit this is only inferred and not based upon feedback derived from Phase Two data. As suggested in the discussion of research question one (5.2.1); limited previous experiences of anxiety reflection and management support may partly explain the trends in student data and the increase in the anxiety experienced by some intervention attendees, who may have only just begun to recognise or reflect upon their anxieties and the means of managing these by the time the intervention concluded.

Intriguingly, participant feedback in the current study made no reference to the role/importance of means of identifying negative automatic thoughts, core beliefs, or cognitive distortions. It is through identifying negative cognitions that Cognitive Behavioural Therapists and intervention leaders may tailor support to students' individualised anxieties. In the current researcher's professional experience, exploration of children and young people's specific circumstances and cognitions enables the use of an individual's first-hand experiences to introduce them to the link between cognitions, emotions and behaviour, and through doing so the role of negative cognitions in the development of anxiety can be highlighted. Through reducing students' self-reported levels of negative automatic thoughts, CBT interventions have produced positive outcomes for children and young people (Muris et al., 2009). Given the limited amount of qualitative feedback in this area, future explorative research may wish to obtain participants' perspectives of strategies/intervention activities designed to ascertain key cognitions, such

as the use of thought diaries, for example. The implications of these findings for EP practice are considered in section 5.8; 'Implications for practice'.

## **5.4 Evaluation of the research methodology used within the current study**

Another key purpose of this chapter is to consider the suitability of the methodology used for addressing the initial research questions. The design employed within this study included quantitative, post-positivist approaches to evaluate the efficacy of the intervention programme (Phase One) and qualitative, constructivist approaches to explore participants' views of programme utility (Phase Two). Whilst it may be argued that some incompatibility exists between post-positivist and constructivist approaches, the pragmatism paradigm underpinning this study gives priority to the research questions of interest (Hanson et al., 2005; 52) and the research methods chosen are considered to be the most appropriate for providing insight into their respective research questions. The methodological considerations and limitations of Phases One and Two will now be considered.

### **5.4.1 Methodological considerations and limitations for Phase One**

#### **5.4.1.1 *Reliability***

##### The Spence Children's Anxiety Scale (SCAS, Spence, 1998)

In addition to use as part of multi-informant anxiety disorder diagnostic procedures, the SCAS "has also been used for identification of children and young people at risk of developing anxiety problems and for monitoring the outcome of interventions to prevent the development of anxiety" (Spence, 2014) via participant self-reports, as with the current study. It makes intuitive sense that young people should be involved in the monitoring of their own anxiety during research, as EPs are encouraged to facilitate the views of young people within their broader practitioner role.

There are limitations to a self-report approach to measurement however, including the possibility of participants responding in a socially desirable manner, reporting inaccurate self-perceptions (Zeidner et al., 2002) or having reservations about sharing the full extent of their anxieties with a researcher external to the school. Participants may also lack the motivation or cognitive abilities required to complete the measures independently (Borgers, Sikkel and Hox, 2004).

The threats to the reliability of self-report measures have been considered in Table 3.7 and the actions taken to address these threats have been outlined. Subsequently, the self-report measures were supplemented with parent-report measures, as using a variety of respondents avoids reliance upon one data source (Zeidner et al., 2002) and enables consideration of the participants' anxious behaviours across both school and home/community contexts. It may have been useful to further the evaluation process via including a teacher-report measure of anxiety, however, identifying a suitable informant for this measure proved difficult within a large secondary school, where individual teachers may lack sufficient contact with participants to confidently provide observations of students' needs. The completion of teacher measures by intervention leaders was also decided against in this study as the TAs did not know all students at time 1.

#### **5.4.1.2      *Internal Validity***

A study which can evidence causal links between treatment (i.e. intervention) and outcomes can be said to boast good internal validity. Threats to the internal validity of the study are outlined in Table 3.6.

A wait-list comparison group was used to measure the rate of maturation demonstrated by wait-list participants, compared to the progress made by intervention attendees during the experimental phase. The lack of a statistically significant effect following intervention indicates that attendees did not experience significant reductions in self-reported anxiety post-intervention, compared to wait-list participants. This trend may represent the inability of the intervention to produce positive outcomes for attendees.

However, a number of additional factors may have impacted on the internal validity of the intervention.

First, a matched pairs process was used to maximise the equivalency of the two conditions at time 1 and guard against selection threats to internal validity. Whilst participants were matched in terms of initial anxiety scores and chronological age, and independent t-tests reiterated the equivalency of the two conditions, it is possible that participants may have differed in other important respects. For example, participants in either condition may have exemplified a) differing emotional vocabulary abilities, with implications for their ability to recognise and articulate their emotions, or b) differing self-perceptions of their coping/emotional management skills pre-intervention. Ideally, randomised allocation to conditions is preferable to guard against such threats; however this was not possible in the current research and may represent a limitation of this study. That said, it has been claimed that RCTs may be unfeasible within applied educational settings (Cohen, Manion and Morrison, 2011; 322).

Second, compensatory equalisation of treatment conditions may have influenced the similar performance between conditions between times 1 and 2, i.e. the comparison group may have compensated in some way for not receiving treatment. Compensatory behaviour may have been prompted by wait-list participants completing the time 1 measure, causing participants to reflect upon their current anxieties and how to address them.

Third, diffusion of treatments may have influenced these findings, whereby participants from the two conditions may have shared programme information due to being within the same cohort. It is not possible to rule out such context-specific factors having an influence on the performance of the wait-list condition. This point reiterates queries about the feasibility of developing strict experimental conditions for post-positivist investigations within an applied educational setting.

Fourth, an experimental effect on student-reported anxiety may not be apparent as a CBT-based intervention may require more sessions in order to

produce effects; as per those findings reported in studies with longer interventions (e.g. Muris et al., 2002; Rice, 2008; Chiu et al., 2013; Rodgers and Dunsmuir, 2013), hence seven sessions may be insufficient. This prompts consideration of a 'dose-response' interaction and the number of group sessions required for an intervention to produce positive outcomes. The desire for more sessions was also indicated by students within Phase Two focus group discussions.

Fifth, it may be that the anxiety management strategies provided by the programme required more time to produce positive outcomes. A time 2 measure post-intervention may not highlight the longer-term benefits of the programme and a time 3 follow-up measure may have highlighted further gains for participants (as with Rodgers and Dunsmuir, 2013). A time 3 measure had been intended within the current study but doctoral timescales meant that this was not feasible. As a key focus of this research related to whether CBT support could facilitate positive change with greater immediacy, this remained the primary focus for Phase One of the study, in light of the omission of a time 3 measure. If more instantaneous changes could be evidenced, then this makes said practice justifiable within school contexts and within the early intervention plan introduced in Figure 2.1. The current findings suggest that such change may not be possible, albeit those factors outlined in this section offer possible explanations as to why statistically significant intervention outcomes may not have been apparent.

Finally, the internal validity of these findings may also have been affected by the sample size within the current study. The final sample was much smaller than desired, prompting reflections regarding the feasibility of recruiting the larger sample sizes required for nomothetic research, both within a school setting and within the limited resources available to an individual doctoral student, whereas the recruitment of a larger sample, perhaps across additional schools/settings may have been possible with additional resources and research personnel. Establishing an appropriate sample size is important if a study is to generate enough statistical power to avoid a Type II error (i.e. the failure to reject a false null hypothesis) (Cohen, Manion and

Morrison, 2011; 184). This point will be considered in the recommendations for future research (section 5.7).

#### **5.4.1.3      *External Validity***

“External validity refers to the degree to which the results can be generalized to the wider population” (Cohen, Manion and Morrison, 2011; 186). This study sought to investigate the efficacy of an indicated CBT-based intervention within a school context and as such, the sample used, the approach to intervention, and the geographical context must all be considered when seeking to generalise these findings to other contexts.

The need for the current research was highlighted in the literature review (section 2.10), given the apparent lack of research into the use of indicated CBT-based interventions with secondary school students within the UK. This study therefore represents one attempt to address the deficits in the previous research.

In particular, a sample from a specific region within the UK was used; all participants were aged between 12 and 13 years, and attended the same secondary school. These factors will influence the ability to generalise these findings to other contexts or populations and future research should aim to replicate the current research with alternative populations in order to broaden knowledge and understanding of the applicability of indicated CBT support, within the parameters outlined in 2.10; ‘rationale for the current study’.

The external validity of these findings will also be affected by the smaller number of participants within the final study sample. Smaller samples may be unrepresentative of broader populations outside of the immediate research context (Cohen, Manion and Morrison, 2011; Button et al., 2013), adding additional impetus for replication of the current study and further investigation into the efficacy of CBT-based support.



#### **5.4.2 Methodological considerations for Phase Two**

Key criteria relating to the 'trustworthiness' (Golafshani, 2003; 601) of the Phase Two data and the actions taken to meet these criteria are considered in Table 3.8. In particular, the researcher sought to demonstrate methodological rigour and clarity, as evidenced in appendices 26-30.

Shenton (2004) argues that it is the researcher's responsibility to provide such clarity, in addition to an ample description of the research context, so that readers may consider the credibility of findings and the 'transferability' of findings to other contexts. Whilst it has been argued that the generalisability of findings is less applicable to those derived from qualitative research (given the highly subjective, individualised circumstances within which such research occurs (ibid), other commentators (Borgman, 1986) have acknowledged that understanding of a phenomenon is formulated across multiple explorations of that phenomenon and that any given study, such as the current study, may provide a 'baseline understanding' (Gross, 1998) with which future research should be contrasted. There is a need therefore to conduct replications of the current constructivist research (Phase Two) with alternative populations and in alternative locations in order to broaden knowledge and understanding of the phenomena of interest. Future replications are also recommended given the limited number of participants included within the current focus group.

The combination of focus group and NGT approaches were utilised in light of those points discussed within sections 3.8.1-3.8.2. In the current study, participant contributions within Phase Two were in line with those suggested by Elliott and Shewchuck (2002; 68), i.e. some participants demonstrated a tendency to dominate discussions during the traditional focus group stage. However, once the NGT procedure commenced, all participants were able to contribute equally.

## **5.5 Reflections on the implementation of the Positive Thinking Programme**

It is also necessary to reflect on intervention implementation, particularly as the intervention used was purpose-made for this study by the researcher. This study also represents one exploration of intervention efficacy following intervention delivery by school personnel.

There has been some variation within previous literature with regard to those professionals involved in intervention delivery (Neil and Christensen, 2009), including mental health practitioners, teachers, and researchers. Within section 2.4, it was proposed that there may be a role for school staff in delivering preventative CBT-based interventions, following guidance and support from EPs. Rait et al. (2010; 117) suggest a supervisory role for EPs in this respect, as per tier 2 of Figure 2.3. Teaching assistants were involved in the delivery of the current intervention, and this study therefore provides insight into the efficacy of CBT-based interventions when delivered by TAs.

These findings suggest limited efficacy of CBT support when primarily delivered by teaching assistants, however these are tentative conclusions, in light of the methodological limitations of the study (outlined in sections 5.4.1.1-5.4.1.3). Previous studies in this area provide contradictory and inconclusive evidence regarding the role of teaching staff, for example; Briesch et al. (2010) presented evidence to suggest that trained CBT practitioners are more effective at implementing interventions which lead to positive outcomes, compared to qualified teachers. Briesch presented a mean effect size for practitioner delivery ( $ES = .56$ ) which was approximately twice that of school personnel ( $ES = .22$ ); potentially reflecting the limited familiarity school personnel may have with CBT principles. However, Barrett et al (2001) presented evidence to the contrary; demonstrating equal efficacy of interventions delivered by psychologists and teachers.

This study therefore leads the researcher to suggest that further research is needed into the impact of indicated interventions delivered by teaching staff, for addressing the anxieties of students. Specifically, further investigation is

required into the efficacy of CBT support delivered by teaching assistants, as TAs are often tasked with the responsibility for intervention delivery in schools. Enlisting the support for TAs for intervention delivery has intuitive appeal, as they; a) may have an existing rapport with the participants, b) will know the educational context well and; c) are considered tier 1 professionals within a CAMHS model of service delivery and in line with the notion that “mental health is everybody’s business” (Department of Health, 2011; 5). Furthermore, direct delivery of longer-term interventions by EPs is perhaps not representative of contemporary EP caseloads; many EPs are often responsible for supporting numerous students and families across a range of educational provisions meaning EP delivery of long-term interventions may not be feasible.

The current study also highlighted several practical considerations, informed by the fidelity checks undertaken. Full fidelity check data is provided in appendices 34-37. As with previous research (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Kam et al., 2003) this researcher found that the involvement of senior school personnel aided the implementation of the programme. The support for the Associate SENCo was enlisted, following recommendations from Green (2013). This support facilitated the recruitment of staff volunteers for intervention delivery and the arrangement of other practicalities, e.g. room bookings.

The current intervention was not however free from logistical complications, some of which may have impacted upon the treatment integrity of the intervention phase. Fuggle, Dunsmuir and Curry (2013) emphasise the complexity of implementing CBT interventions within schools, and factors such as room double-booking, students arriving late to sessions and staff temporarily leaving during sessions, may have impacted upon the efficacy of this intervention.

As detailed in section 2.6, Webster et al (2011; 15) suggest clearly defined, specific roles for TAs. They propose that the role of TAs be limited to the delivery of pre-prepared interventions, for which they have received sufficient training; as was intended within the current intervention. Anecdotal evidence

obtained via the fidelity checks highlighted a number of pertinent points, some of which link to the views of Webster et al., including:

- The TAs demonstrated some hesitancy with deviating from the session plans and appeared less willing to modify these plans according to matters raised by participants within the sessions. Green (2013) encountered similar issues and staff hesitancy may potentially be due to their limited confidence or experience with using CBT-based approaches.
- TAs were more likely to ask direct, closed questions (e.g. “did you feel worried?”) and less likely to use Socratic questioning (e.g. “how did that make you feel?”) to explore participants’ anxieties.
- The TAs reported that they would have welcomed additional group sessions with a focus on ‘rapport building’, prior to the intervention commencing.
- The TAs appeared more confident with discussing ‘surface level’ anxiety management strategies with participants, as opposed to attempting to explore the triggers to those anxieties experienced by participants. This links to the findings of Blatchford et al. (2007); which highlighted that TAs’ roles are primarily pedagogical, involving working directly with students on set tasks with specific curriculum outcomes.

## **5.6 Ethical Considerations**

Careful consideration was given to the consent procedures for intervention participation. ‘Opt-in’ consent procedures were used, with provision of thorough written information deemed necessary for optimising participants’ ability to provide informed consent. It is possible however, that the nature of the consent procedures may have contributed to the limited sample size discussed earlier in this chapter, as the need for parents to a) study the detailed consent information provided and b) return opt-in consent forms to a specific department in school may have impacted upon parental response rate. Opt-in consent procedures were however considered imperative given the nature of needs investigated.

Consideration should also be given to whether participants may have perceived discussing anxieties as an activity which may exacerbate otherwise 'containable' worries. Such activities may have the potential to induce "psychological stress, anxiety or humiliation or cause more than minimal pain" (BPS, 2010; 14) and a desire from students/families to avoid such activities may also explain the limited sample size. Parents and students may also have perceived there to be a stigma around mental health support, hence, pre-intervention information sessions were provided to enable participants to raise any queries/concerns. Ground rules were also essential within the intervention, for ensuring that participants understood the confidential nature of information discussed within the sessions.

The potential for additional stress for parents of wait-list participants also represents an ethical challenge (BPS, 2010; 13). Attempts were made to minimise this threat, again, through the sharing of the researcher's contact details, and the pre-intervention information sessions to enable stakeholders' queries/concerns to be addressed. Parents were also reassured of the 'typical' level of support their children would receive during the wait-list phase and of their entitlement to contact the SENCo, if they experienced any concerns regarding their child during the wait-list phase.

Finally, following the safeguarding disclosures made by participants during the Phase Two focus groups, it was necessary to ensure that the participating school was aware of these admissions. The school's safeguarding procedures were followed in response to these disclosures and the designated safeguarding personnel were informed of the admissions by the researcher and respective participants.

## **5.7 Implications for future research**

A number of recommendations for future research have been suggested throughout this chapter. This section will now consider these points in greater detail.

First, mixed methods research within the pragmatism paradigm may continue to be used to explore the efficacy of indicated CBT-based support with UK populations; the current research design has been beneficial in that it enabled investigation of intervention efficacy and qualitative exploration of intervention utility and ways of optimising intervention delivery (Gulliford, 2015, in press). There remains, however, a need to replicate the current study with alternative populations which meet those parameters outlined in section 2.10; 'rationale for the current study'. This study represents one investigation of this nature, with a sample comprised of students from one secondary school within the West Midlands. Replicating this study with other populations in other regions will serve to broaden the empirical evidence base regarding the efficacy of indicated CBT-based interventions with secondary school students in the UK. Indeed, authors within the field (Stallard, 2011; 25) have acknowledged that the evidence base for CBT within young people is derived primarily from American and Australian studies.

Second, such research should incorporate time 3 measures of participant anxiety. The addition of follow-up measures may offer insight into participant progress over time, following the opportunity for participants to put intervention input and strategies into practice. Previous studies have demonstrated participant progress at time 3 (e.g. Rice, 2008; Rodgers and Dunsmuir, 2013) and it would have been beneficial to ascertain whether the trends in the current data continued at follow-up. That is; a) did participants in both conditions continue to experience reduced anxiety, was the rate of progress between conditions comparable and was there a continued lack of statistically significant progress between both conditions, and b) did the comparisons in parent-report data across conditions alter in any way and did parents of wait-list participants continue to provide higher ratings of student anxiety?

Third, the multi-informant approach to data collection within this study could be extended to incorporate teacher/TA-based measures of anxiety in future replications of this design, to provide; a) an additional perspective of

students' needs within the school context and b) triangulation of evidence regarding student progress. The logistics of implementing a teacher measure will require consideration, however, given the discussion in section 5.4.1 regarding the use of such measures in secondary schools.

Fourth, anecdotal observations derived from the fidelity checks tentatively suggest the need for investigation into the self-efficacy and confidence of teaching assistants when conducting CBT-based interventions. Such research may serve to identify those conditions which may optimise the confidence of teaching staff, which may then assist with the implementation of efficacious interventions. Such research will be important as the utilisation of TAs in therapeutic programmes represents a marked change from their usual academic-support roles.

Fifth, as indicated in section 5.2, the lack of statistically significant findings within the current study prompt contemplation of a 'dose-response' interaction. That is; there is a need to identify the possible minimum number (and duration) of sessions required to produce positive outcomes for intervention attendees. Phase Two feedback indicated that participants would have welcomed a greater number of sessions. Phase Two data also offered insight into participants' perceptions of the critical features of the programme and those anxiety management mechanisms which participants felt they had begun to develop through intervention participation. Future research may wish to implement longer interventions with a view to enabling participants to further develop their anxiety management skills, which in turn, may enable participants to provide even greater insight into the mechanisms of change underpinning intervention efficacy, and 'why' and 'how' they perceive the intervention to produce positive outcomes.

Furthermore, replication of the current study with a larger sample would be beneficial for increasing the external validity of the findings. Future research may also consider the potential inclusion of several schools. It should be noted that the breadth of the current study was limited by the resources available to an individual doctoral student; as such future doctoral research may also experience similar difficulties with recruiting and supporting larger

samples. Indeed, the occurrence of smaller sample sizes in CBT-based intervention research has been acknowledged by authors (Stallard, 2011; 25).

Additionally, the trends identified within the current parent-report data warrant further investigation into parent-reported levels of student anxiety in future studies. Such research should also be undertaken given the apparent lack of research into the impacts of indicated CBT interventions upon parental perceptions of students' anxieties (section 5.2.2.1). Future research may wish to measure parental perceptions at times 1, 2 and 3.

Finally, further research should explore parental perceptions of anxiety interventions as a whole. This recommendation is made in light of the limited parental uptake experienced within the current study. The limited sample size in this research was intriguing, given the circumstances which gave rise to the current study (section 2.3.2.2); including both national and local impetus for undertaking research into the efficacy of anxiety-orientated intervention support. Despite suggestions from local EPs and School personnel that anxiety support was required within local secondary schools, a limited number of parents provided consent for their children to participate in this study. Explorations of parental perceptions of anxiety-related interventions may provide crucial insight into parental perceptions of mental health interventions. For example, it is possible that parental reservations or misconceptions may be highlighted, which may in turn inform future EP practice in this area. Capturing parental perceptions of CBT interventions will be essential for facilitating maximum levels of parental consent (and student participation) in future.

Various authors (Stallard, 2011; 25; King, Heyne and Ollendick, 2005; Hudson, 2005; James, James, Cowdrey, Soler and Choke, 2013) indicate that the majority of CBT research to date has been outcome-orientated, with limited focus on mechanisms underpinning the CBT model, or which mechanisms may produce positive outcomes. As such, Phase Two provided insight into those elements of a CBT-based approach which young people may perceive to be beneficial. However, given the limited sample size within



Phase Two, this researcher advocates the need for further research in this area, in order to increase professional understanding of the effective elements of CBT. Such research will be imperative for ensuring that programme efficacy is optimised and the inclusion of unnecessary elements/components, potentially costing time and effort without real benefit to participants, is reduced.

## **5.8 Implications for practice**

This study has highlighted and/or reiterated a number of factors which the current EPS and other Educational Psychologists may wish to consider when implementing CBT approaches in schools in future:

- Professionals could be encouraged to utilise a multi-informant approach for measuring student progress. The current research incorporated both student-report and parent-report measures, and it may be advisable for EPs to also include teacher-report measures in future practice, as per previous studies (Rice, 2008; Rodgers and Dunsmuir, 2013) potentially enabling triangulation of evaluative information regarding student needs.
- As with Phase Two, EPs should also capture students' views regarding the useful aspects of interventions, if they are to continually refine and improve interventions (Gulliford, 2015, in press; APA, 2006).
- The trends in suggest that EP implementation of CBT-based interventions encapsulates additional responsibilities above and beyond the weekly sessions provided to students. The contrast between participants' scores and parents' scores in Figure 5.1 illustrates the complexity of the EP role and the need to provide support and emotional containment to the broader family around the child. A number of key theories/models are relevant which will support EPs with conceptualising the needs of the child in relation to the contexts within which they live and are educated. Examples include Miller and Leyden's coherent framework (1999) and Bronfenbrenner's ecological systems theory (1990).
- The current study experienced limited parental uptake and as such, EPs may wish to consider ways and means of addressing parental concerns

and possible misconceptions regarding CBT support. The researcher acknowledges that parents and students may perceive there to be a stigma around mental health and emotional well-being interventions and as such, parent and student information sessions were provided prior to the current intervention commencing. Despite this, parental uptake was still limited and as Fuggle, Dunsmuir and Curry (2013; 106) suggest, EPs may need to incorporate CBT principles at a whole school level of systemic analysis, in order to reduce the stigma associated with mental health support.

- Whilst the school perceived there to be a need for the intervention, it appears that not all parents agreed, given the limited parental uptake. There may be a need, therefore, for universal interventions designed to enhance the coping of all students and desensitise parents from their concerns about intervention participation. Indeed, in their review of 52 systematic reviews of mental health intervention, Weare and Nind (2011; i64) suggested the need for mental health interventions within broader school contexts which promote positive mental health, concluding that “mental health promotion in schools needs to redress the balance somewhat in favour of more work on targeted approaches, while continuing to embed and integrate them within a robust universal approach”.
- There is an opportunity for the EPS to continue to implement similar interventions and evaluate the efficacy of these interventions, as they are the only service offering group-based anxiety interventions within the LA. Furthermore, there may be the opportunity for the time 3 measure omitted from the current study to be undertaken by the EPS at a later date, to evaluate participant progress over time.
- EPs should consider arrangements for close supervision of teaching staff when the latter are responsible for programme delivery. In the current study, weekly supervision was provided to TAs and it is recommended that the development of future interventions should include the negotiation of protected supervision meetings for teaching staff, prioritised over other duties during the programme delivery period. Anecdotal feedback from the TAs within the current study suggested that staff may have also

welcomed supervisory meetings immediately after intervention sessions. Supervision may have reduced TAs' hesitancy to deviate from session plans, by potentially increasing their confidence with broader CBT principles and responding to the issues that students may bring to the sessions. Indeed, with regards to curriculum-based interventions Blatchford et al (2012) claimed that "TAs leading interventions were rarely well prepared, monitored or supervised in relation to this role". Professionals could therefore be encouraged to provide ample supervision for those staff undertaking intervention delivery.

- EPs may also support TAs with developing their confidence and abilities with using therapeutic questioning styles, such as Socratic questioning, as therapeutic questioning may represent an area of skill not readily required by all teaching assistants. The notion of supporting TAs with developing their interaction and questioning styles, as suggested by Blatchford et al (2012), is useful here. Whilst written with curriculum-orientated support in mind, their conclusions highlight the need for TAs to; 'check student understanding', 'provide clear explanations of concepts' and 'use opening-up talk' to encourage concept exploration; principles which would apply to therapeutically-orientated support also.
- Future research and intervention practice may therefore need to make arrangements with participating schools to ensure that TA involvement in intervention delivery will be prioritised above all other duties during the programme period and that TA time be protected for intervention delivery. Otherwise, sudden re-deployment of staff prior to or during intervention sessions may well impact on the treatment integrity of the intervention.

FG discussions also highlighted a number of key considerations from the students' perspective, which practitioners implementing CBT interventions may wish to consider:

- The need for increased duration of individual sessions, including double lessons where possible.
- Means of incorporating additional games and rapport-building exercises at the start of the intervention, to aid group cohesion prior to commencement of CBT-based activities.

- Pairing students with friends for social support within the groups. Whilst some students attended the Positive Thinking Programme with friends, the matched pairs process also impacted upon intervention groupings.
- The possible need for post-intervention on-going support for some students, perhaps on a smaller-scale basis. For example, in the current study the participating school employs a team of learning mentors. Two participants with on-going anxiety concerns were granted access to learning mentor support by the school.

## **5.9 Evidence-based practice**

The nature of what may constitute evidence-based practice was discussed in section 3.6. This section will now relate that discussion to the current study.

Traditionally, positivist methodologies (e.g. RCTs) have been preferred for providing the ‘best possible evidence’ regarding the application of psychology within education (Robson, 2011). However, achieving true scientific rigour and randomisation within applied educational contexts is not always feasible and alternative experimental methods are often required, as discussed within the methodology chapter (3.3.1.2). With regard to school-based interventions, there may be a need for supplementing questions of ‘what works’, with qualitative exploration regarding potential mechanisms of change.

Consequently, the current study utilised a mixed-methods design in order to explore the efficacy of an indicated CBT-based intervention for supporting young people experiencing anxiety. Phase One incorporated quantitative evaluation of student-reported and parent-reported accounts of participants’ anxiety. Phase Two entailed a qualitative exploration of participants’ perceived utility of the programme, in an attempt to gather insight into how CBT may be of benefit to intervention attendees. This research was therefore underpinned by the pragmatism paradigm.

Phase One did not demonstrate any statistically significant improvements in student-reported anxiety or parent-reported perceptions of participant

anxiety. However, possible explanations for these trends have been provided, including reference to methodological limitations; most notably, the limited sample size obtained and the absence of follow-up data. Whilst the hierarchy of research evidence has been criticised for prioritising certain sources of evidence over others (Hammersley, 2005), if this hierarchy is considered, Phase One represents a quasi-experiment and as such, the findings of this study will need to be considered within the context of the broader research literature for indicated support.

However, Phase One only appears to tell certain aspects of the story, with Phase Two providing data regarding participants' perceived utility of a CBT-based intervention. Future qualitative research into the potential mechanisms of change underpinning the use of CBT with young people is required, as this will enable comparisons with the data obtained within the current study, with a view to ensuring that interventions prioritise the most influential aspects of the CBT model.

## **5.10 Conclusions**

### **5.10.1 The unique contributions of this study**

This study sought to contribute to the existing literature regarding CBT support, albeit with some methodological threats to the level of explanation achieved, as discussed within this chapter. The contributions of this study to the evidence base for CBT support are now reiterated.

The literature reviewed in chapter two illustrated that minimal research had been undertaken into the use of indicated CBT-based group support with UK-based school students. Much of the existing research into the efficacy of CBT support had been conducted in other nations (e.g. Mifsud and Rapee, 2005; Dadds et al., 1997; Stallard, 2005; 2008; Muris et al., 2009; Rice, 2008; Muris et al., 2002; Chiu et al., 2013; Miller et al., 2011; Bernstein et al., 2005; Kendall, 1994; Wood, 2006; King et al., 1998; Silverman et al., 1999; Muris et al., 2002; Chiu et al., 2013, Bernstein et al., 2005) and with participants' demonstrating higher-level anxiety and anxiety disorders (Kendall, 1994; Wood, 2006; King et al., 1998; Silverman et al., 1999; Stallard, 2011). This

research focuses upon whether indicated CBT-based support can produce positive outcomes for children and young people who may be experiencing anxiety during later childhood and early adolescence. The sample age range was designed to address the limited research with UK students of this age. This latter point was of particular relevance to the Local Authority within which the current study was based, as reports suggested that secondary students were experiencing anxiety symptomatology for the first time, following their transitions to key stages three and four, due to a range of social and academic reasons.

This study also provided an exploration of participants' perceptions of their post-intervention anxiety regulation abilities, and their views of CBT's contribution to these. There has been little prior research in this area, particularly with a sample equivalent to that included within the current study.

Reflections have been provided regarding the research methodology used, both for future research and for the practice of those EPs seeking to implement CBT-based interventions within schools. The researcher hopes that the learning points discussed throughout this chapter can inform the practice of others.

### **5.10.2 Summary of research findings**

A range of studies have demonstrated that CBT can address anxiety in young people, when implemented on a universal, targeted and to some extent, indicated basis. Those studies discussed in section 2.9 provide initial support for indicated CBT interventions, and Phase One of the current study sought to contribute to the literature underpinning the use of CBT-based approaches through investigating the efficacy of an indicated intervention with UK-based secondary school students demonstrating anxiety. Whilst statistically significant reductions in student-report and parent-reported anxieties were not evident, the researcher concludes that further research into the efficacy of this approach is warranted, specifically with UK secondary school students, given the limited number of studies in this area and given the methodological limitations within the current study.

Phase Two provided a qualitative exploration of participants' perceptions of their post-intervention anxiety regulation abilities, given that "We need to be doing a better job of assessing what we believe to be involved in the process of treatment change" (Hudson, 2005; 161). A summary of key thematic findings is provided, derived from a range of qualitative research approaches. In particular, participants appeared to benefit from intervention content which a) broadened their knowledge of anxiety management and coping mechanisms, designed to alleviate the physiological, emotional, cognitive and behavioural implications of anxiety, and b) increased their understanding of means of addressing the underlying causes of their anxieties. Participants also valued the opportunity to develop a sense of group membership through building relationships with intervention peers who may be experiencing similar needs and through reflecting upon the social support available to them during times of anxiety, so that they may confide in or seek advice from others both within and outside of school.

These mixed findings, combined with a continued political onus for identifying efficacious intervention support for young people experiencing mental health needs (Department of Health, 2011; 5) mean that further research is required in this area. It will be important for such research to continue, as efficacious early intervention may prevent the escalation of anxiety, which in turn is imperative for promoting positive developmental outcomes for young people, as: "Anxiety disorders are among the most prevalent childhood psychological disorders. In addition to causing acute distress to the child, parent and school staff, anxiety disorders may also have a significant impact on a child's educational and social development and persist chronically into adulthood" (McLoone, Hudson and Rapee, 2006; 219).

# References

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## 6. References

Achenbach, T. M. (1991). **Manual for the child behaviour checklist and 1991 profile**. Burlington, VT: University of Vermont.

Achenbach, T. M., & Rescorla, L. A. (2001). **Manual for the ASEBA school-age forms profiles**. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

Aggett, P., Boyd, E. and Fletcher, J. (2006). Developing a Tier 1 CAMHS Foundation Course: Report on a 4-year initiative. **Clinical Child Psychology and Psychiatry**. 11(3); pp.319-333.

Alexander, L., & Maratray, C. (1989). The development of an abbreviated version of the Mathematics anxiety rating scale. **Measurement and Education in counselling and development**. 22; pp.143-150.

Allen, J.L., Rapee, R.M., and Sandberg, S. (2008). Severe Life Events and Chronic Adversities as Antecedents to Anxiety in Children: A Matched Control Study. **Journal of Abnormal Child Psychology**. 36 (7); pp.1047-1056.

American Psychiatric Association (APA) (2013). **Diagnostic and statistical manual of mental disorders** (5th ed. revised ed. DSM-V). Arlington, VA: American Psychiatric Publishing.

American Psychological Association (APA) (2006). Evidence-based practice in psychology. **American Psychologist**. 61(4); pp.271-285.

American Psychological Association (APA) (2013). **Anxiety Disorders and Effective Treatment** [online]. Available at: <http://www.apa.org/helpcenter/anxiety-treatment.aspx> [Accessed 20th July 2013].

Amstadter, A. (2008). Emotion regulation and anxiety disorders. **Journal of Anxiety Disorders**. 22 (2); pp.211–221.

Anderson, D. J., Williams, S., McGee, R., & Silva, P. H. (1987). DSM-III disorders in preadolescent children: Prevalence in a large sample from the general population. **Archives of General Psychiatry**, 44 (1); pp.69-76.



Anna Freud Centre (2014). **National Evaluation of Children and Young People's IAPT (CYP IAPT)** [online]. Available at: <http://www.annafreud.org/pages/national-evaluation-of-children-and-young-peoples-iapt.html> [Accessed 31st January 2014].

Association of Educational Psychologists. (2011) **Code of Professional Practice**. Durham: AEP.

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

Bandura, A. (1997). **Self-efficacy: The Exercise of Control**. Freeman. New York.

Barrett, P. (2000). Treatment of childhood anxiety: Developmental aspects. **Clinical Psychology Review**. 20(4); pp.479-494.

Barrett, P. (2004). **FRIENDS for life: Group leader's manual for children**. Brisbane, Australia: Australian Academic Press.

Barrett, P. (2007). **Introduction to Friends** [online]. Available at: <http://www.friendsinfo.net/downloads/FRIENDSintrobooklet.pdf>

Barrett, P. (2010). **FRIENDS for life - Group Leaders Manual for children**. Nottingham: Barrett Research Resources Pty Ltd.

Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1996). Family treatment of childhood anxiety: A controlled trial. **Journal of Consulting and Clinical Psychology**. 64(2); pp.333–342.

Barrett, P.M., Lowry-Webster, H.M. and Holmes, J.M. (1998). **FRIENDS program for children: Group leader's manual**. Brisbane, Australia: Australian Academic Press.

Barrett, P. M., Sonderegger, R., and Sonderegger, S. L. (2001). Evaluation of an anxiety-prevention and positive-coping program (FRIENDS) for children and adolescents of non-English speaking backgrounds. **Behaviour Change**, 18(2); pp.78–91.

Barrett, P. and 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(4); pp.399-410.

Bateson, M., Brilot, B. and Nettle, D. (2011). Anxiety: An Evolutionary Approach. **The Canadian Journal of Psychiatry**. 56 (12); pp.707-715.

Beck, R.N. (1979). **Handbook in Social Philosophy**. New York: Macmillan.

Berg, I. (1997). School refusal and truancy. **Archives of Disease in Childhood**. 76(2); pp.90-91.

Bernstein, G. A., Borchardt, C. M., & Perwien, A. R. (1996). Anxiety disorders in children and adolescents: A review of the past 10 years. **Journal of the American Academy of Child and Adolescent Psychiatry**, 35 (9); pp.1110-1119.

Birmaher, B., Brent, D.A., Chiappetta, L., Bridge, J., Monga, S., and Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): a replication study. **Journal of the American Academy of Child & Adolescent Psychiatry**. 38; pp.1230–1236.

Bittner, A., Egger, H.L., Erkanli, A., Costello, E.J., Foley, D.L., and Angold, A. (2007). What do childhood anxiety disorders predict? **Journal of Child Psychology and Psychiatry**. 48 (12); pp.1174–83.

Blagg, N. (1987). **School Phobia and its Treatment**. London: Croom Helm.

Blatchford, P., Russell, A., Bassett, P. and Brown, P. (2007). The role and effects of teaching assistants in English primary schools (Years 4 to 6). Results from the Class Size and Pupil-Adult Ratios (CSPAR) KS2 Project. **British Educational Research Journal**. 33(1); pp.5-26.

Blatchford, P., Webster, R. And Russell, A. (2012). **Challenging the role and deployment of teaching assistants in mainstream schools: The impact on schools**. Final report on findings from the Effective Deployment of Teaching Assistants (EDTA) project.

Borgers, N., Sikkel, D., and Hox, J. (2004). Response Effects in Surveys on Children and Adolescents: The Effect of Number of Response Options, Negative Wording, and Neutral Mid-Point. **Quality and Quantity**. 38(1), 17-33.

Botvin, G. (2004). Advancing prevention science and practice: Challenges, critical issues, and future directions. **Prevention Science**. 5(1); pp.69-72.

Boyatzis, R. E. (1998). **Transforming qualitative information: Thematic analysis and code development**. London; California; New Delhi: SAGE Publications.

Brace, N., Kemp, R. and Snelgar, R. (2012). **SPSS for Psychologists: A Guide to Data Analysis Using SPSS for Windows**. London: Palgrave.

Braun, V. and Clarke, V. (2006). Using thematic analysis in Psychology. **Qualitative Research in Psychology**. 3(2); pp.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(4); pp.155-165.

British Psychological Society, Division of Educational and Child Psychology (DECP) (2002). **Professional Practice Guidelines**. Leicester: BPS.

British Psychological Society (2009) **Code of Ethics and Conduct**. Leicester: BPS.

British Psychological Society (2010) **Code of Human Research Ethics**. Leicester: BPS.

Bronfenbrenner, U. (1990). **Discovering what families do. In Rebuilding the Nest: A new commitment to the American family**. Family Service America.

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? **Qualitative Research**. 6(1); pp.97-113.

Burns, M.K. (2011). School Psychology Research: Combining Ecological Theory and Prevention Science. **School Psychology Review**. 40(1); pp.132-139.

Burrell, G. and Morgan, G. (1979) **Sociological Paradigms and Organizational Analysis**. London: Heinemann Educational.

Button, K.S. et al., 2013. Power failure: why small sample size undermines the reliability of neuroscience. **Nature reviews. Neuroscience**. 14(5); pp.365–76.

Cartwright-Hatton, S., McNicol, K. and Doubleday, E. (2006). Anxiety in a neglected population: Anxiety in pre-adolescent children. **Clinical Psychology Review**. 26(7); pp.817-833.

Cartwright-Hatton, S., Roberts, C., Chitsabesan, P., Fothergill, C. and Harrington, R. (2004). Systematic review of the efficacy of cognitive behaviour therapies for childhood and adolescent anxiety disorders. **British Journal of Clinical Psychology**. 43 (4); pp.421-436.

Chavira, D., Stein, M., Bailey, K., & Stein, M. (2004). Child anxiety in primary care: Prevalent but untreated. **Depression and Anxiety**, 20(4); pp.155 – 164.

Chiu, A.W., Langer, D.A., McLoed, B.D., Har, K., Drahota, A., Galla, B.M., Jacobs, J., Ifekwunigwe, M. and Wood, J.J. (2013). Effectiveness of Modular CBT for Child Anxiety in Elementary Schools. **School Psychology Quarterly**. 28 (2); pp.141–153.

Chorpita, B.F., Yim, L., Moffitt, C., Umemoto, L.A. and Francis, S.E. (2000). Assessment of Symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. **Behaviour Research and Therapy**. 38(8); pp.835-855.

Cisler, J.M., Bunmi, O.O, Feldner, M.T. AND Forsyth, J.P. (2010). Emotion Regulation and the Anxiety Disorders: An Integrative Review. **Journal of Psychopathology and Behavioral Assessment**. 32 (1); pp.68-82.

Clarke, V. (2011). **A Randomised Control Trial of the ‘Friends for Life’ Programme’**. DAppEdPsy thesis, University of Nottingham.

Cohen, L., Manion, L. and Morrison, K. (2011) **Research Methods in Education**. 7<sup>th</sup> Ed. London: Routledge.

Coolican, H. (2007). **Research Methods and Statistics in Psychology** (4<sup>th</sup> Edition). London: Hodder Arnold.

Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence. **Archives of General Psychiatry**, 60(8); pp.837-844.

Coventry and Warwickshire NHS Partnership Trust (2013). **Children and Adolescents Mental Health Services (CAMHS)** [online]. Available at: <http://www.covwarkpt.nhs.uk/camhs/Pages/default.aspx> [Accessed on: 22<sup>nd</sup> July 2013].

Creswell, J.W., & Plano Clark, V.L. (2011). **Designing and Conducting Mixed Methods Research** (2<sup>nd</sup> edition). London: SAGE.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A.Tashakkori & C.Teddlie (Eds.), **Handbook of mixed methods in social and behavioral research** (pp. 209–240). Thousand Oaks, CA: Sage.

Dadds, M. R., Spence, S. H., Holland, D. E., Barrett, P. M., & Laurens, K. R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. **Journal of Consulting and Clinical Psychology**. 65(4); pp.627-635.

Dancey, C.P. and Reidy, J. (2011). **Statistics without Maths for Psychology** (5<sup>th</sup> Edition). Essex: Pearson.

De Ruyter, K. (1996). Focus versus nominal group interviews: a comparative analysis. **Marketing Intelligence and Planning**. 14(6); pp.44-50.

Delbecq, A.L., Van de Ven, A.H. and Gustavsonm D.H. (1975). **Group Techniques for Program – planning: A Guide to Nominal Group and Delphi Processes**. Scott-Foresman, Glenview, IL.

Dempsey, K. (2012). **A mixed-method study investigating a Circle of Adults approach to group work in schools**. DAppEdPsy thesis, University of Nottingham.

Deni, J. R. (2001). Teacher attention in producing effective behavior change in students. **Education**. 99(4); pp.406-412,

Denscombe, M. (2008). Communities of practice: a research paradigm for the mixed methis approach. **Journal of Mixed Methods Research**. 2(3); pp.270-283.

Department for Children, Schools and Families (2008) **Targeted Mental Health in Schools Project** (TaMHS). Nottingham: DCSF Publications.

Department for Education (2013). **Advice on school attendance**. London: DfE.

Department for Education and Skills (DfES). (2001). **Promoting children's mental health within early years and school settings**. London: DfES.

Department of Health (DoH). (2004). National service framework for children, young people and maternity services change for children – Every Child Matters. In: **The mental health and psychological well-being of children and young people**. London: Department of Health Department for Education and Skills.

Department of Health (2011). **No health without mental health: A cross-government mental health outcomes strategy for people of all ages.** London: DH.

Donnelly, O. (2013). **Evaluating the impact of an outdoor adventure education intervention for primary school children perceived to be vulnerable.** DAppEdPsy thesis, University of Nottingham.

Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D. and Schellinger, K.B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. **Child Development.** 82(1); pp.405-432.

Egger, H.L., Costello, E.J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. **Journal of the American Academy of Child and Adolescent Psychiatry.** 42 (7); pp.797-807.

Elliott, T.R. and Shewchuk, R.M. (2002). Using the Nominal Group Technique to Identify the Problems Experienced by Persons Living With Severe Physical Disabilities. **Journal of Clinical Psychology in Medical Setting.** 9(2); pp.65-76.

Endler, N.S. and Kocovski, N.L. (2001). State and trait anxiety revisited. **Anxiety Disorders.** 15(3); pp.231-245.

Ercikan, K. And Roth, W.M. (2006). What good is polarizing research into qualitative and quantitative? **Educational Researcher.** 35(5); pp.14-23.

Evans, J., Harden, A. and Thomas, J. (2004). What are effective strategies to support pupils with emotional and behavioural difficulties (EBD) in mainstream primary schools? Findings from a systematic review of research. **Journal of Research in Special Educational Needs.** 4(1); pp.2-16.

Every Child Matters (2010). **CAMHS: Four-Tier Strategic Framework** [online]. Available at:  
<http://webarchive.nationalarchives.gov.uk/20100202100434/http://dcsf.gov.uk/everychildmatters/healthandwellbeing/mentalhealthissues/camhs/fourtierstrategicframework/fourtierstrategicframework/> [Accessed on: 30<sup>th</sup> January 2014].

Farmer, E.M.Z., Burns, B., Phillips, S.D., Angold, A., & Costello, J.E. (2003). Pathways into and through mental health services for children and adolescents. **Psychiatric Services.** 54(1); pp.60–66.

Farrell, P., Woods, K., Lewis, S., Rooney, S., Squires, G., & O'Connor, M. (2006). **A review of the functions and contribution of educational psychologists in England and Wales in light of the "Every Child Matters: Change for Children"**. London: DfES.

Field, A.P. (2006). Is conditioning a useful framework for understanding the development and treatment of phobias? **Clinical Psychology Review**. 26 (7); pp.857–875.

Field, A. (2013). **Discovering statistics using IBM SPSS. Statistics: and sex and drugs and rock n' roll**. (4<sup>th</sup> Edition). London: Sage.

Fisak, Brian, Richard, Dan, & Mann, Angela. (2011). The Prevention of Child and Adolescent Anxiety: A Meta-analytic Review. **Prevention Science**, 12(3); pp.255-268.

Flay, B., Biglan, A. & Boruch, R., 2005. Standards of evidence: Criteria for efficacy effectiveness and dissemination. **Prevention science**. 6(3); pp.151–175.

Forman, S., Olin, S. S., Hoagwood, K.E., Crowe, M., & Saka, N. (2009). Evidence-Based Interventions in Schools: Developers' Views of Implementation Barriers and Facilitators. **School Mental Health**, 1(1); pp.26-36.

Fox, M. (2003) Opening Pandora's Box: evidenced-based practice for educational psychologists. **Educational Psychology in Practice**. 19(2); pp.91-102.

Frederickson, N. and Cline, T. (2009). **Special Educational Needs, Inclusion and Diversity (2<sup>nd</sup> Ed)**. Buckingham: Open University Press.

Frederickson, N., Miller, A. and Cline, T. (2008). **Topics in Applied Psychology: Educational Psychology**. London: Hodder Education.

Friendly, M. (2012). **Power Analysis for ANOVA Designs** [Online]. Available at: <http://www.math.yorku.ca/SCS/Online/power/>

Fuggle, P., Dunsmuir, S. and Curry, V. (2013). **CBT with children, young people & families**. London: Sage.

Gage, N.L. (1989). The paradigm wars and their aftermath. **Teachers College Record**. 91(2); pp.135-150.

Gillham, J.E., Hamilton, J., Freres, D.R., Patton, K., and Gallop, R. (2006). Preventing depression among early adolescents in the primary care setting: A randomized controlled study of the Penn Resiliency Program. **Journal of Abnormal Child Psychology**. 34(2); pp.203-219.

Ginsburg, G.S., Kendall, P.C., Sakolsky, D., Compton, S.N., Piacentini, J., Albano, A.M., March, J.S. (2011). Remission after acute treatment in children and adolescents with anxiety disorders: Findings from the CAMS. **Journal of Consulting and Clinical Psychology**. 79(6); pp.806-813.

Glass, G., McGaw, B. & Smith, M. (1981) **Meta-analysis in social research** (Beverly Hills, CA, Sage).

Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. **The Qualitative Report**. 8(4); pp.597-607.

Gorard, S. and Smith, E. (2006). Editorial: combining numbers with narratives. **Evaluation and Research in Education**. 19(2); 59-62.

Gordon, W. And Langmain, R. (1988). **Qualitative Market Research**. Gower, Aldershot.

Gough, D. (2007). Weight of Evidence: a framework for the appraisal of the quality and relevance of evidence. **Research Papers in Education**, 22(2); pp.213-228.

Green, S. (2013). **An Evaluation of a FRIENDS for Life Programme in a mainstream secondary school and its impact on emotional distress, anxiety and coping skills**. DAppEdPsy thesis. University of Nottingham.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. **Educational Evaluation and Policy Analysis**. 11(3); pp.255–274.

Gregory, A.M., Caspi, A., Moffitt, T.E., Koenen, K., Eley, T.C., and Poulton, R. (2007). Juvenile mental health histories of adults with anxiety disorders. **The American Journal of Psychiatry**. 164 (2); pp.301–308.

Grills, A.E., and Ollendick, T.H. (2002). Peer victimization, global self-worth, and anxiety in middle school children. **Journal of Clinical Child & Adolescent Psychology**. 31 (1); pp.59-68.

Gross, J.J. (1998). The emerging field of emotion regulation: An integrative review. **Review of General Psychology**. 2 (3); pp.271–299.



Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries, **Educational Communication and Technology Journal**. 29(2); pp.75–91.

Gulliford, A. (2015). Evidence based-practice in educational psychology: the nature of evidence. In Cline, T, Gulliford, A. and Bettel, S. (2014) (Eds) **Educational Psychology**. Hove. Taylor and Francis. *In press*.

Guy, W. (1976). **ECDEU assessment manual for psychopharmacology. Revised**. Rockville, MD: U. S. National Institute of Health, Psychopharmacology Research Branch.

Hammersley, M. (2005). Is the evidence-based practice movement doing more good than harm? Reflections on Ian Chalmer's case for research-based policy making and practice. **Evidence and Policy**. 1(1); pp.85-100.

Hanson, W.E., Creswell, J.W., Plano Clark, V.L., Petska, K.S. and Creswell, J.D. (2005). **Journal of Counseling Psychology**. 52(2); pp. 224–235.

Hargreaves, D.H. (1997). In defense of research for evidence-based teaching: a rejoinder to Martyn Hammersley. **British Educational Research Journal**. 23(4); pp.405-419.

Heard, P.M., Dadds, M.R. and Rapee, R.M. (1991) **The Coping Koala workbook. Modified Australian version of Kendall's treatment program for anxious children**. University of Queensland, Brisbane, Australia

Heyne, D., King, N., and Olendek, T.H. (2005). 'School Refusal'. In: Graham, P. (Ed.), Cognitive Behaviour Therapy for Children and Families (2<sup>nd</sup> Ed.). Cambridge University Press.

Higgins J.P.T. and Green S. (editors). **Cochrane Handbook for Systematic Reviews of Interventions**, Version 5 (updated 2011). The Cochrane Collaboration [2012]. Available from [www.cochrane-handbook.org](http://www.cochrane-handbook.org)

Hudson, J.L. (2005). Mechanisms of Change in Cognitive Behavioral Therapy for Anxious Youth. **Clinical Psychology: Science and Practice**. 12(2); pp.161-165.

Hudson, J.L., and Rapee, R.M. (2004). From anxious temperament to disorder: an etiological model of generalized anxiety disorder. In: Heimber, R.G., Turk, C.L. and Mennin, D.S. (Eds.) **Generalized Anxiety Disorder: Advances in Research and Practice**. New York: Guilford.

Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S. (1996). Social and cognitive impairment in first grade children with anxious and depressive symptoms. **Journal of Clinical Child Psychology**, 25(1); pp.15-24.

Improving Access to Psychological Therapies (IAPT) (2006). Available at: [www.iapt.nhs.uk/about-iapt/](http://www.iapt.nhs.uk/about-iapt/) [Accessed on: 17<sup>th</sup> November 2012].

James, A.C., James, G., Cowdrey, F.A., Soler, A. and Choke, A. (2013). Cognitive Behavioural Therapy for anxiety disorders in children and adolescents (Review). **Cochrane Database of Systematic Reviews** [Online]. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004690.pub3/pdf/standard> [Accessed: 06 January 2014].

James, A.A.C.J., Soler, A., & Weatherall, R.R.W. (2005). **Cognitive behavioural therapy for anxiety disorders in children and adolescents** (Publication no. 10.1002/14651858.CD004690.pub2).

Jensen, P. 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); pp.53-74.

Johnson, A.M., Falstein, E.I., Szurek, S.A. and Svendsen, M. (1941). School Phobia. *American Journal of Orthopsychiatry*. 11 (4); pp.702-711.

Kashani, J. H., & Orvaschel, H. (1990). A community study of anxiety in children and adolescents. **American Journal of Psychiatry**, 147 (3); pp.313-318.

Kam, C.M., Greenberg, M.T., & Walls, C. (2003). Examining the Role of Implementation Quality in School-Based Prevention Using the PATHS Curriculum. **Prevention Science**, 4(1); pp.55-63.

Kavanagh, K., Oliver, S., Caird, J., Tucker, H., Greaves, A., Harden, A., Oakley, A., Lorenc, T. and Thomas, J. (2009). **Inequalities and the mental health of young people. A systematic review of secondary school cognitive behavioural-based interventions**. EPPI Centre Report no. 1703. University of London: EPPI Centre.

Keller, M.B., Lavori, P.W., Wunder, J., Beardslee, W.R., Schwartz, C.E., and Roth, J. (1992). Chronic course of anxiety disorders in children and adolescents. **Journal of the American Academy of Child and Adolescent Psychiatry**. 31 (4); pp.595–599.

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

Kendall, P. C. (1994). Treatment of anxiety disorders in children: Results of a randomized clinical trial. **Journal of Consulting and Clinical Psychology**, 62(1); pp.100-110.

Kendall, P. C., Choudhury, M. A., Hudson, J., & Webb, A. (2002). **The C.A.T. project manual**. Ardmore, PA: Workbook Publishing.

King, N.J., Heyne, D. and Ollendick, T.H. (2005). Cognitive-Behavioral Treatments for Anxiety and Phobic Disorders in Children and Adolescents: A Review. **Behavioral Disorders**. 30(3); pp.241-257.

King, N.J. and Ollendick, T.H. (1989). Children's anxiety and phobic disorders in school setting: classification, assessment, and intervention issues. **Review of Educational Research**. 59(4); pp.431-470.

King N.J., Tonge, B.J., Heyne, D. et al. (1998), Cognitive-behavioral treatment of school-refusing children: a controlled evaluation. **Journal of the American Academy of Child and Adolescent Psychiatry**. 37(4); pp.395-403.

Kiselica, M.S., Baker, S.B., Thomas, R.N. AND Reedy, S. (1994). Effects of stress inoculation training on anxiety, stress, and academic performance among adolescents. **Journal of Counseling Psychology**. 41(3); pp.335-342.

Kuhn, T. S. (1962). **The structure of scientific revolutions** (1st ed.). Chicago: University of Chicago Press.

Kurtz, Z. (2004). **What works in promoting children's mental health: The evidence and the implications for Sure Start local programmes**. London: DfES.

Lake, D. (2012) **A systematic review to investigate the effectiveness of school-based, intervention support in reducing symptoms of anxiety in pupils of compulsory school age, in mainstream educational placements**. Submitted to the University of Nottingham [07/08/12].

Lane, K.L., Bocian, K.M., MacMillan, D.L. and Gresham, F.M. (2004). Treatment Integrity: An Essential – But often forgotten – component of school-based interventions. **Preventing School Failure**. 48(3); pp.36-43.

Last, C.G., Hersen, M., Kazdin, A.E., Francis, G., and Grubb, H.J. (1987). Psychiatric illness in the mothers of anxious children. **The American Journal of Psychiatry**. 144 (12); pp.1580–83.

Last, C.G., Hersen, M., Kazdin, A.E., Orvaschel, H., and Perrin, S. (1991). Anxiety disorders in children and their families. **Archives of General Psychiatry**. 48 (10); pp.928-934.

Last, C.G., Perrin, S., Hersen, M., and Kazdin, A.E. (1996). A prospective study of childhood anxiety disorders. **Journal of the American Academy of Child and Adolescent Psychiatry**. 35 (11): pp.1502–1510.

Lauchlan, F. (2003). Responding to chronic non-attendance: a review of intervention approaches. **Educational Psychology in Practice**. 19(2); pp.132-146.

Lieb, R., Wittchen, H.U., Hofler, M., Fuetsch, M., Stein, M.B. and Merikangas, K.R. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring: a prospective-longitudinal community study. **Archives of General Psychiatry**. 57(9); pp.859-866.

Lindsay, G. (1998). Are educational psychologists serious about research? **Educational and Child Psychology**. 15(3); pp.74-85.

Lock, S. and Barrett, P.M. (2003). A Longitudinal Study of Developmental Differences in Universal Preventive Intervention for Child Anxiety. **Behaviour Change**. 20 (4); pp.183-199.

Lowry-Webster, H.M., Barrett, P.M. and Dadds, M.R. (2001). A Universal Prevention Trial of Anxiety and Depressive Symptomatology in Childhood: Preliminary Data from an Australian Study. **Behaviour Change**. 18(1); pp.36-50.

Lowry-Webster, H.M., Barrett, P.M. and Dadds, M.R. (2001). A Universal Prevention Trial of Anxiety and Depressive Symptomatology in Childhood: Results at 1-year follow-up. **Behaviour change**. 20(1); pp.25-43.

MacKay, T. (2002) Discussion paper – The future of educational psychology. **Educational Psychology in Practice**. 18(3); pp.245–253.

MacKenzie, N. and Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. **Issues in Educational Research**. 16(2); pp.193-205.

Majcher D, Pollack MH (1996). Childhood anxiety disorders. In: Hechtman, Trokenberg L, eds. **Do they grow out of it? Long-term outcomes of childhood disorders**. Washington, DC, American Psychiatric Association: pp.139-169.

Manassis, K., Mendlowitz, S. L., Scapillato, D., Avery, D., Fiksenbaum, L., Freire, M., et al. (2002). Group and individual Cognitive-Behavioral Therapy for childhood anxiety disorders: A randomized trial. **Journal of the American Academy of Child & Adolescent Psychiatry**, 41(12), pp.1423-1430.

Manassis, K., Wilansky-Traynor, P., Farzan, N., Kleiman, V., Parker, K. and Sanford, M. (2010). The feelings club: randomized controlled Evaluation of school-based CBT for anxious or depressive symptoms. **Depression and Anxiety**. 27 (10); pp.945-952.

Mangrum, C. T., & Strichart, S. S. (2005a). **Study skills and strategies for students in upper elementary and middle school** (2nd ed.). Loveland, CO: Mangrum-Strichart Learning Resources.

Mangrum, C. T., & Strichart, S. S. (2005b). **Study skills and strategies for students in high school** (2nd ed.). Loveland, CO: Mangrum-Strichart Learning Resources.

March, J. S., Parker, J., Sullivan, K., Stallings, P., & Conners, C. K. (1997). The multidimensional anxiety scale for children (MASC). Factor structure, reliability, and validity. **Journal of the American Academy of Child and Adolescent Psychiatry**. 36(4); pp.554-565.

March, J. S. (1998). **The Multidimensional Anxiety Scale for Children (MASC)**. North Tonawanda, NY: MHS.

Maric, M., Heyne, D.A., MacKinnon, D.P., van Widenfelt, B.M. and Westenberg, P.M. (2013). Cognitive Mediation of Cognitive-Behavioural Therapy Outcomes for Anxiety-Based School Refusal. **Behavioural and Cognitive Psychotherapy**. 41(5); pp.549-564.

Mark, M.M. (2010). Emergence in and from quasi-experimental design and analysis. In S.N. Hesse-Biber and P. Leavy (eds). **Handbook of Emergent Methods**. New York: Guilford Press.

Masia, C.L., Klein, R.G., Storch, E.A., Corda, B. (2001). School-Based Behavioural Treatment for Social Anxiety Disorder in Adolescents: Results of a Pilot Study. **Journal of the American Academy of Child and Adolescent Psychiatry**. 40(7); pp.780-786.

Masia-Warner, C., Klein, R.G., Dent, H.C., Fisher, P.H., Alvir, J., Albano, A.M. and Guardino, M. (2005). School-Based Intervention for Adolescents with Social Anxiety Disorder: Results of a Controlled Study. **Journal of Abnormal Child Psychology**. 33(6); pp.707-722.

Masia-Warner, C.M., Fisher, P.H., Shrout, P.E., Rathor, S. and Klein, R.G. (2007). Treating adolescents with social anxiety disorder in school: an attention control trial. **Journal of Child Psychology and Psychiatry**. 48(7); pp.676-686.

McLeod, B.D., Wood, J.J., and Weisz, J.R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. **Clinical Psychology Review**. 27 (2); pp.155-172.

McLoone, J., Hudson, J.L. and Rapee, R.M. (2006). Treating Anxiety Disorders in a School Setting. **Education and Treatment of Children**, 29 (2); pp.219-242.

Meltzer, H., Gatward, R., Goodman, R. and Ford, T. (2003). Mental health of children and adolescents in Great Britain. **International Review of Psychiatry**. 15(1); pp.185-187.

Menzies, R.G., and Clarke, J.C. (1995). The etiology of phobias: a nonassociative account. **Clinical Psychology Review**. 15 (1); pp.23–48.

Mertens, D.M. (2005). **Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches**. (2nd ed.) Thousand Oaks: Sage.

Mertens, D.M. (2010). **Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative and mixed methods** (3rd ed.). London: Sage.

Mifsud, C. M. and Rapee, R. M. (2005). Early intervention for childhood anxiety in a school setting: outcomes for an economically disadvantaged population. **Journal of the American Academy of Child & Adolescent Psychiatry**. 44(10); pp.996-1004.

Miller, A. (2008). School phobia and school refusal: Coping with life by coping with school? In: Frederickson, N., Miller, A. and Cline, T. (Eds). (2008). **Topics in Applied Psychology: Educational Psychology**. London: Hodder Education.

Miller, A. and Todd, Z. (2002). Educational Psychology and difficult behaviour in schools: Conceptual and methodological challenges for an evidence-based profession. **Educational and Child Psychology**. 19(3); pp.82-94

Miller, L.D., Laye-Gindhu, A., Liu, Y., March, J.S., Thordarson, D.S. and Garland, E.J. (2011a and 2011b). Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials. **Behaviour Research and Therapy**. 49(5); pp.315-323.

Mineka, S., and Zinbarg, R. (2006). A contemporary learning theory perspective on the etiology of anxiety disorders: It's not what you thought it was. **American Psychologist**. 61 (1); pp.10–26.

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. (2009). **Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement** [online]. Available at: [www.prisma-statement.org](http://www.prisma-statement.org) [Accessed 15<sup>th</sup> December 2013].

Morris, R. J., & Kratochwill, T. R. (1983). **Treating children's fears and phobias: A behavioral approach**. Elmsford, NY: Pergamon Press.

Morris, R. J., Kratochwill, T. R., Schoenfield, G., & Auster, E. R. (2008). Childhood fears, phobias, and related anxieties. In R. J. Morris & T. R. Kratochwill (Eds.), **The practice of child therapy** (4th ed., pp. 93-141). New York: Taylor & Francis.

Muris, P., Mayer, B., den Adel, M., Roos, T. and van Wamelen, J. (2009) Predictors of Change Following Cognitive-Behavioral Treatment of Children with Anxiety Problems: A Preliminary Investigation on Negative Automatic Thoughts and Anxiety Control. **Child Psychiatry & Human Development**. 40(1); pp.139–151.

Muris, P., Meesters, C. and van Melick, M. (2002). Treatment of childhood anxiety disorders: a preliminary comparison between cognitive-behavioral group therapy and a psychological placebo intervention. **Journal of Behavior Therapy and Experimental Psychiatry**. 33(3); pp.143-158.

Muris, P., Merckelbach, H., Van Brakel, A., and Mayer, B. (1999) The revised version of the screen for child anxiety related emotional disorders (SCARED-R): further evidence for its reliability and validity. **Anxiety Stress Coping**. 12; pp.411–425.

Mychailyszyn, M.P., Beidas, R.S., Benjamin, C.L., Edmunds, J.M., Podell, J.L., Cohen, J.S. and Kendall, P.C. (2011). Assessing And Treating Child Anxiety In Schools. **Psychology in the Schools**. 48(3); pp.223-232.

Neil, A.L. and Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. **Clinical Psychology Review**. 29; pp.208-215.

Nottingham, University of. (2011-12). **Doctorate in Applied Educational Psychology - Course Handbook year two supplement**.

Nottingham, University of. (2012-13). **Doctorate in Applied Educational Psychology - Course Handbook year three supplement**.

Nottingham, University of (2013). **Code of Research Conduct and Research Ethics**.

Nuata, M.H., Scholing, A., Rapee, R.M., Abbott, M., Spence, S.H., & Waters, A. (2004) A parent-report measure of children's anxiety: Psychometric properties and comparison with child-report in a clinical and nonclinical sample. **Behaviour Research and Therapy**, 42(7), pp.813-839.

O'Connor, S., Carney, T., House, E., Ferguson, E., & O'Connor, R. (2010b). **The Paediatric Index of Emotional Distress Manual**. London: GL Assessment Ltd.

O'Leary, Z. (2004). **The essential guide to doing research**. London: Sage.

OFSTED. (2012). \*\*\*\*\* **school inspection report**: Crown Copyright.

Oxford Cognitive Therapy Centre (OCTC) (2014). **Oxford Cognitive Therapy Centre** [online]. Available at: [www.octc.co.uk/](http://www.octc.co.uk/)

Palinkas, L. et al. (2011). Mixed method designs in implementation research. **Administration and policy in mental health**, 38, pp.44–53.

Paul, J. (2011). **Evaluating the Impact of a Universal FRIENDS For Life Programme on Emotional Distress and Academic Self-Perceptions**. DAppEdPsy thesis, University of Nottingham.

Perkins, P.E. and Hightower, A.D. (2002). **T-CRS 2.1 teacher-child rating scale: Examiners manual**. Rochester, NY: Children's Institute.



Pina, A.A., Zerr, A.A., Villalta, I.K. and Gonzales, N.A. (2012). Indicated Prevention and Early Intervention for Childhood Anxiety: A Randomized Trial With Caucasian and Hispanic/Latino Youth. **Journal of Consulting and Clinical Psychology**. 80 (5); pp.940–946.

Pine, D.S., Cohen, P., Gurley, D., Brook, J. and Ma, Y. (1998). The Risk for Early-Adulthood Anxiety and Depressive Disorders in Adolescents With Anxiety and Depressive Disorders. **Archives of General Psychiatry**. 55 (1); pp.56-64.

Rait, S., Monsen, M.M. and Squires, G. (2010). Cognitive behaviour therapies and their implications for applied educational psychology practice. **Educational Psychology in Practice**. 26 (2); pp.105-122.

Ramey, H.L. and Grubb, S. (2009). Modernism, Postmodernism and (Evidence-Based) Practice. **Contemporary Family Therapy**. 31(2); pp.75-86.

Rapee, R.M., Schniering, C.A., and Hudson, J.L. (2009). Anxiety Disorders During Childhood and Adolescence: Origins and Treatment. **Annual Review of Clinical Psychology**. 5; pp. 311-341.

Rapee, R.M. Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In Rey, J.M. (Ed.) **IACAPAP e-Textbook of Child and Adolescent Mental Health**. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions 2012.

Razali, N.M. and Wah, Y.B. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling tests. **Journal of Statistical Modeling and Analytics**. 2(1); pp.21-33.

Reaven, J., Blakeley-Smith, A., Culhane-Shelburne, K. and Hepburn, S. (2012). Group cognitive behavior therapy for children with high-functioning autism spectrum disorders and anxiety: a randomized trial. **Journal of Child Psychology and Psychiatry**. 53(4); pp. 410–419.

Reynolds, M., Brewin, C. R., & Saxton, M. (2000). Emotional disclosure in school children. **Journal of Child Psychology and Psychiatry**. 41(2); pp.151–159.

Reynolds, C., & Kamphaus, R. (1992). **Behaviour assessment system for children: Manual**. Circle Pines, MN: American Guidance Service.

Reynolds, C.R. and Richmond, B.O. (1978). What I think and feel: A revised measure of children's manifest anxiety. **Journal of Abnormal Child Psychology**. 6(2); pp.271-280.

Robson, C. (2011). **Real World Research**. 3<sup>rd</sup> Edition. Oxford: Blackwell.

Rodgers, A. and Dunsmuir, S. (2013), A controlled evaluation of the 'FRIENDS for Life' emotional resiliency programme on overall anxiety levels, anxiety subtype levels and school adjustment. **Child and Adolescent Mental Health**.

Rubie-Davies, C.M., Blatchford, P., Webster, R., Koutsoubou, M., & Bassett, P. (2010). Enhancing learning? A comparison of teacher and teaching assistant interactions with pupils. **School Effectiveness and School Improvement**. 21(4); pp.429-449.

Rubin, K.H., Coplan, R.J., and Bowker, J.C. (2009). Social withdrawal in childhood. **Annual Review of Psychology**. 60; pp. 141-171.

Ryan, A.B. (2006). **Post-positivist approaches to research** [online]. Available at: <http://eprints.nuim.ie/874/> [Accessed on: 03 September 2013].

Salters-Pedneault, K., Roemer, L., Tull, M.T., Rucker, L. And Mennin, D.S. (2006). Evidence of Broad Deficits in Emotion Regulation Associated with Chronic Worry and Generalized Anxiety Disorder. **Cognitive Therapy and Research**. 30 (4); pp.469-480.

Sanborne, E. (2002). **A Value Framework for Community Psychology**. [online]. Available at: [http://www.uml.edu/docs/What%20Are%20Community%20Psychologists%20Revised\\_tcm18-61922.pdf](http://www.uml.edu/docs/What%20Are%20Community%20Psychologists%20Revised_tcm18-61922.pdf) [Accessed on: 28th November 2012].

Schniering, C.A., and Lyneham, H.J. (2007). The Children's Automatic Thoughts Scale in a clinical sample: Psychometric properties and clinical utility. **Behaviour Research and Therapy**. 45 (8); pp.1931-1940.

Schniering, C.A. and Rapee, R.M. (2002) Development and validation of a measure of children's automatic thoughts: the children's automatic thoughts scale. **Behaviour Research and Therapy**. 45 (8); pp.1931-1940

Shadish, W.R., Cook, T.D. & Campbell, D.T. (2001). **Experimental and Quasi-Experimental Designs for Generalized Causal Inference [Paperback]**, Cengage Learning; 2<sup>nd</sup> edition.

Sheffield, J.K., Spence, S.H., Rapee, R.M., Kowalenko, N., Wignall, A., Davis, A., et al. (2006). Evaluation of universal, indicated and combined cognitive-behavioral approaches to the prevention of depression among adolescents. **Journal of Consulting and Clinical Psychology**. 74(1); pp.66-79.

Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. **Education for Information**. 22(2); pp.63-75.

Shucksmith, J., Summerbell, C., Jones, S. and Whittaker, V. (2007). **Mental wellbeing of children in primary education (targeted/indicated activities)**. London: National Institute for Health and Clinical Excellence.

Silverman, W. K., & Albano, A. M. (1996). **The anxiety disorders interview schedule for children for DSM-IV: (Child and parent versions)**. San Antonio, TX: Psychological Corporation.

Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. F., Lumpkin, P. W., & Carmichael, D. H. (1999). Treating anxiety disorders in children with group cognitive-behavioral therapy: A randomized clinical trial. **Journal of Consulting and Clinical Psychology**. 67(6); pp.995-1003.

Slavin, R.E. (2002). Evidence-based education policies: Transforming educational practice and research. **Educational Researchers**. 31(7); pp.15-22.

Slee, N., Arensman, E., Garnefski, N., and Spinhoven, P. (2007). Cognitive behavioral therapy for deliberate self-harm. **Crisis**. 28(4); pp.175– 182.

Sofronoff, K., Attwood, T. and Hinton, S. (2005). A randomised controlled trial of a CBT intervention for anxiety in children with Asperger syndrome. **Journal of Child Psychology and Psychiatry**. 46 (11); pp.1152–1160.

Spence, S.H. (1997). Structure of anxiety symptoms in children: A confirmatory factor-analytic study. **Journal of Abnormal Psychology**. 106(2); pp.280-297.

Spence, S. H. (1998). A measure of anxiety symptoms among children. **Behaviour Research and Therapy**. 36(5); pp.545–566.

Spence, S.H. (2014). **The Spence Children's Anxiety Scale Website** [online]. Available at: [www.scasewebsite.com](http://www.scasewebsite.com).

Spence, S., Barrett, P. M., & Turner, C. M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. **Anxiety Disorders**. 17(6); pp.605-625.

Spielberger, C.D. (1973). Manual for the state-trait anxiety inventory for children. Palo Alto, CA: Consulting Psychologists Press.

Squires, G. (2010). Countering the argument that educational psychologists need specific training to use cognitive behavioural therapy. **Emotional and Behavioural Difficulties**. 15(4); pp.279-294.

Squires, G. And Dunsmuir, S. (2011). Embedding Cognitive Behavioural Therapy training in practice: facilitators and barriers for Trainee Educational Psychologists (TEPS). **Educational Psychology in Practice**. 27(2); pp.117-132.

Stallard, P. (2001). **Evidence based therapy for children and young people** [online]. Available at: <http://cep.lse.ac.uk/seminarpapers/WB-26-01-11STALLARD.pdf>. [Accessed 1st February 2014].

Stallard, P. (2005). **A Clinician's guide to Think Good – Feel Good. Using CBT with children and young people**. West Sussex: Wiley & Sons Ltd.

Stallard, P. (2008). **Anxiety: Cognitive Behaviour Therapy with Children and Young People (CBT with Children, Adolescents and Families)**. Bruner; Routeledge.

Stallard, P., Simpson, N., Anderson, S., Carter, T., Osborn, C. and Bush S. (2005). An evaluation of the FRIENDS programme: a cognitive behaviour therapy intervention to promote emotional resilience. **Archives of Disease in Childhood**. 90(10); pp.1016-1019.

Stallard, P., Simpson, N., Anderson, S. and Goddard, M. (2008) The FRIENDS emotional health prevention programme: 12 month follow-up of a universal UK school based trial. **European Child & Adolescent Psychiatry**. 17(5); pp.283-289.

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. **Management Decision**. 39(7); pp.551-555.

Stith, S., Pruitt, I., Dees, J., Fronce, M., Green, N., Som, A., et al. (2006). Implementing community-based prevention programming: A review of the literature. **Journal of Primary Prevention**. 27(6); pp.599-617.

Strauss, C.C., Frame, C.L. and Forehand, R.L. (1987). Psychosocial impairment associated with anxiety in children. **Journal of Clinical Child Psychology**. 16(3); pp.235-239.

Ströhle, A. (2009). Physical activity, exercise, depression and anxiety disorders. **Journal of Neural Transmission**. 116(6); pp.777-784.

Tashakkori, A., & Teddlie, C. (2003). **Handbook of mixed methods in social and behavioural research**. London: Cassell.

Teddlie, C., & Tashakkori, A. (2003). Major Issues and Controversies in the use of mixed methods in the social and behavioural sciences. In A. Tashakkori & C. Teddlie (Eds.), **Handbook of Mixed Methods in Social and Behavioral Research**. London: SAGE.

Teddlie, C., & Tashakkori, A. (2009). **Foundations of Mixed Method Research: Integrating quantitative and qualitative approaches in the social and behavioural sciences**. London: Sage.

UNESCO (1994) **The UNESCO Salamanca Statement and Framework for Action on Special Needs Education**. Paris: Education.

UNICEF (2007). **Child poverty in perspective: An overview of child well-being in rich countries. A comprehensive assessment of the lives and well-being of children and adolescents in the economically advanced nations**. Report card 7. Florence; United Nations Children's Fund Innocenti Research Centre.

Van Ameringen, M., Mancini, C., & Farvolden, P. (2003). The impact of anxiety disorders on educational achievement. **Anxiety Disorders**. 17(5); pp.561-571.

Warwickshire County Council (2013). **Market Position Statement Special Educational Needs (SEN) 2013-2014**. Strategic Commissioning Business Unit, People Group. Warwickshire County Council.

Weare, K. and Nind, M. (2011). Mental health promotion and problem prevention in schools: what does the evidence say? **Health Promotion International**. 26(S1); pp. i29-i69.

Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C., & Russell, A. (2011). The wider pedagogical role of teaching assistants. **School Leadership & Management**. 31(1); pp.3-20.

Weems, C.F., Silverman, W.K., Rapee, R.M. and Pina, A.A. (2003) The role of control in childhood anxiety disorders. **Cognitive Therapy and Research**. 27(5); pp.557–568.

White, S.W., Ollendick, T., Scahill, L., Oswald, D. and Albano, A.M. (2009). Preliminary Efficacy of a Cognitive-Behavioral Treatment Program for Anxious Youth with Autism Spectrum Disorders. **Journal of Autism and Developmental Disorders**. 39 (12); pp.1652-1662.

WHO (2004). **Prevention of Mental Health Disorders. Effective Interventions and Policy Options. A Summary Report**. Geneva: World Health Organisation.

Willig, C., 2013. **Introducing qualitative research in psychology. Adventures in theory and method**. Maidenhead. OUP.

Wimmer, M. (2008). **School Refusal. Principal Leadership**, 8(8), 10-14. Available at:  
<http://www.nasponline.org/publications/booksproducts/School%20Refusal%20Ch%201.pdf>

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

Wright, D.B. (2003). Making friends with your data: Improving how statistics are conducted and reported. **British Journal of Educational Psychology**. 73(1); pp.123-136.

Wright, D.B. (2006). Comparing groups in a before-after design: When t test and ANCOVA produce different results. **British Journal of Educational Psychology**. 76(3); pp.663-675

Zeidner, M., Roberts, R. and Matthews, G. (2002) Can Emotional Intelligence Be Schooled? A Critical Review. **Educational Psychologist**. 37(4); pp. 215-231.

Zinbarg, R.E., Craske, M.G., & Barlow, D.H. (2006). **Mastery of Your Anxiety and Worry: Therapist Guide**. Cary, NC, USA: Oxford University Press.

## 6.1 Secondary references

Borgman, C.L. (1986), The user's mental model of an information retrieval system: an experiment on a prototype online catalog, **International Journal of Man-Machine Studies**. 24; pp.47–64. In: Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. **Education for Information**. 22(2); pp.63-75.

Gross, M.R. (1998). **Imposed queries in the school library media center: a descriptive study**. Doctoral Dissertation, University of California. In: Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. **Education for Information**. 22(2); pp.63-75.

Kendall, P.C. (1991). **Guiding theory for treating children and adolescents**. In: Kendall, P.C. (ed.) Child and adolescent therapy: cognitive-behavioural procedures. New York: Guildford Press.

Laynard, R. (2005). **Therapy for all on the NHS**. Paper presented at the Sainsbury Centre for Mental Health. Cited in: Squires, G. And Dunsmuir, S. (2011). Embedding Cognitive Behavioural Therapy training in practice: facilitators and barriers for Trainee Educational Psychologists (TEPS). **Educational Psychology in Practice**. 27(2); pp.117-132.

# Appendices

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## 7. Appendices

### 7.1 Appendix 1 - Definitions of Anxiety Disorders according to the Diagnostic and statistical manual of mental disorders

(American Psychiatric Association, 2013).

Anxiety Disorder	Description
Generalised Anxiety Disorder	<p>Excessive anxiety about a number of events or activities, occurring more days than not, for at least 6 months.</p> <p>The focus of the anxiety and worry is not confined to features of an Axis I disorder; being embarrassed in public (as in social phobia), being contaminated (as in obsessive-compulsive disorder), being away from home or close relatives (as in separation anxiety disorder), gaining weight (as in anorexia nervosa), having multiple physical complaints (as in somatisation disorder), or having a serious illness (as in hypochondriasis), and the anxiety and worry do not occur exclusively during posttraumatic stress disorder.</p> <p>The anxiety and worry are associated with at least three of the following six symptoms (with at least some symptoms present for more days than not, for the past 6 months):</p>



	Restlessness or feeling keyed up or on edge; being easily fatigued; difficulty concentrating or mind going blank; irritability; muscle tension; sleep disturbance.
Panic disorder/Agoraphobia	<p>Recurrent unexpected panic attacks.</p> <p>At least one of the attacks has been followed by at least 1 month of one or more of the following:</p> <ul style="list-style-type: none"> <li>• Persistent concern about having additional panic attacks</li> <li>• Worry about the implications of the attack or its consequences</li> <li>• A significant change in behaviour related to the attacks</li> <li>• Presence or absence of agoraphobia</li> <li>• The panic attacks are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism).</li> <li>• The panic attacks are not better accounted for by another mental disorder.</li> </ul>
Social Phobia	<ul style="list-style-type: none"> <li>• A fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others and feels he or she will act in an embarrassing</li> </ul>

	<p>manner.</p> <ul style="list-style-type: none"> <li>• Exposure to the feared social situation provokes anxiety, which can take the form of a panic attack.</li> <li>• The person recognises that the fear is excessive or unreasonable.</li> <li>• The feared social or performance situations are avoided or are endured with distress.</li> <li>• The avoidance, anxious anticipation, or distress in the feared situation interferes significantly with the person's normal routine, occupational functioning, or social activities or relationships.</li> <li>• The condition is not better accounted for by another mental disorder, substance use, or general medical condition</li> <li>• If a general medical condition or another mental disorder is present, the fear is unrelated to it.</li> <li>• The phobia may be considered generalised if fears include most social situations.</li> </ul>
Specific Phobia	<ul style="list-style-type: none"> <li>• Persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation.</li> <li>• Exposure provokes immediate anxiety, which can take the form of a situationally predisposed panic attack.</li> <li>• Patients recognise that the fear is excessive or unreasonable.</li> </ul>

	<ul style="list-style-type: none"> <li>• Patients avoid the phobic situation or else endure it with intense anxiety or distress.</li> <li>• The distress in the feared situation interferes significantly with the person's normal routine, occupational functioning, or social activities or relationships.</li> <li>• In persons younger than 18 years, the duration is of at least 6 months.</li> <li>• The fear is not better accounted for by another mental disorder.</li> </ul>
Obsessive Compulsive Disorder	<p><b>Obsessions:</b></p> <p>Recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate, causing anxiety or distress.</p> <p>The thoughts, impulses, or images are not simply excessive worries about real-life problems.</p> <p>The person attempts to ignore or suppress such thoughts, impulses, or images or to neutralise them with some other thought or action.</p> <p>The person recognises that the obsessional thoughts, impulses, or images are a product of his or her own mind.</p> <p><b>Compulsions:</b></p> <ul style="list-style-type: none"> <li>• Repetitive behaviours or mental acts that the person feels driven to perform in response to an obsession or according to</li> </ul>

	<p>rules that must be applied rigidly.</p> <ul style="list-style-type: none"> <li>• The behaviours or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation.</li> <li>• These behaviours or mental acts are either not connected in a realistic way with what they are designed to neutralise or prevent, or they are clearly excessive.</li> </ul>
Separation Anxiety	<p>Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:</p> <ul style="list-style-type: none"> <li>• recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated</li> <li>• persistent and excessive worry about losing, or about possible harm befalling, major attachment figures</li> <li>• persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped)</li> <li>• persistent reluctance or refusal to go to school or elsewhere because of fear of separation</li> <li>• persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings</li> </ul>

	<ul style="list-style-type: none"> <li>• persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home</li> <li>• repeated nightmares involving the theme of separation</li> <li>• repeated complaints of physical symptoms (such as headaches, stomach aches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated</li> <li>• The duration of the disturbance is at least 4 weeks.</li> <li>• The onset is before age 18 years.</li> <li>• The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.</li> </ul>
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## 7.2 Appendix 2 – Physiological and psychological symptoms of anxiety disorders

(Anxiety UK, 2012).

Type of symptoms	Examples
<b>Physiological</b>	<ul style="list-style-type: none"><li>• Increased heart rate</li><li>• Increased muscle tension</li><li>• “Jelly legs”</li><li>• Tingling in the hands and feet</li><li>• Hyperventilation (over breathing)</li><li>• Dizziness</li><li>• Difficulty in breathing</li><li>• Wanting to use the toilet more often</li><li>• Feeling sick</li><li>• Tight band across the chest area</li><li>• Tension headaches</li><li>• Hot flushes</li><li>• Increased perspiration</li><li>• Dry mouth</li><li>• Shaking</li><li>• Choking sensations</li><li>• Palpitations</li></ul>
<b>Psychological</b>	<ul style="list-style-type: none"><li>• Concerns that you may lose control and/or go “mad”</li><li>• Concerns regarding death</li><li>• Concerns relating to ill health or serious ill health e.g. heart attack/sickness/fainting/brain tumour.</li><li>• Concerns that other people are aware to/observing your anxiety</li><li>• Feeling detached from your environment and the people in it</li><li>• Feeling like wanting to run away/escape from the situation</li><li>• Feeling on edge and alert to everything around you</li></ul>

### 7.3 Appendix 3 – Table of studies included within systematic literature review

Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and conclusions
<p>Muris, P., Mayer, B., den Adel, M., Roos, T. and van Wamelen, J. (2009)</p> <p>To evaluate negative automatic thoughts and anxiety control as predictors of change produced by cognitive-behavioral treatment of youths with anxiety disorders</p>	<p>45 children.</p> <p>(23 boys and 22 girls; mean age = 10.33 years, SD = 1.04) who both a) received parental consent for participation and b) scored in the top 10% of the sample for symptoms of social phobia (n = 22), separation anxiety disorder (n = 18), and/or generalized anxiety disorder</p>	<p>'The Coping Koala'</p>	<p>Clinical Psychology Masters students</p>	<p>No</p>	<p>One-group pre-test/post-test quasi-experimental design</p>	<p>SCARED-R</p> <p>Children's Automatic Thoughts Scale</p> <p>Anxiety Control Questionnaire for Children</p>	<p>Anxiety symptoms significantly reduced post-intervention.</p> <p>Changes in negative automatic thoughts and anxiety control over the course of intervention were also shown to be statistically significant with negative automatic thoughts decreasing, whilst perceived anxiety control increased.</p>

	subscales (n = 27)						
Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
<p>Karimi and Venkatesan (2009).</p> <p>The use of group-based CBT for addressing one specific area of performance anxiety; Mathematics Anxiety.</p>	<p>A total of 23 participants (aged 13-16 years) were divided between an intervention group (n = 16, 8 male) and a control group (n = 17, 8 male). All participants were Indian and currently based in India.</p>	Unspecified	Psychology Doctoral students, domain unspecified	Yes	RCT	'Mathematics Anxiety Rating Scale' (MARS, Alexander and Martray, 1989).	CBT-related reductions were noted in 'Maths test domain' and 'numerical domain' suggesting that experimental group participants felt less anxious with regards to examinations or handling numerical data after CBT support.



Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
Rice (2008) To compare the efficacy of CBT intervention support with relaxation training for reducing the level of anxiety experienced by school students, when delivered in an indicated manner	Twenty United States Middle and High School students from Grades 5 to 12 (i.e. aged 10 to 18 years) who displayed early anxiety needs on a screening measure.	'The Cognitive Behavioral Treatment of Anxious Adolescents' (Kendall et al., 2002)	The researcher (a school psychologist)	Yes: Placebo and control	Quasi-experiment comparing intervention condition with placebo and control	Multidimensional Anxiety Scale for Children (MASC, March, 1998).  Child Behavior Checklist (CBCL, Achenbach, 2001).	A 3x2 MANOVA demonstrated a statistically significant group by time interaction, indicating that in the CBT group participants had significantly lower post-intervention scores on the MASC, when compared with peers from the relaxation and control conditions.

Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
<p>Muris et al. (2002)</p> <p>To investigate the efficacy of indicated CBT support for children experiencing anxiety needs.</p>	<p>Thirty participants (aged 9-12 years) were randomly allocated to CBT (3 = male), psychological placebo (4 = male) or control (3 = male) conditions (n = 10 in each).</p>	<p>The 'Coping Koala' (Barrett et al., 1996).</p>	<p>'Therapists' but professional role unclear.</p>	<p>Yes: placebo and control</p>	<p>RCT</p>	<p>The RCADS Revised Children's Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moffitt, Umemoto, &amp; Francis, 2000)</p> <p>The State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973).</p>	<p>A series of 2x2 ANOVAS indicated that the CBT condition produced significantly greater reductions in participant anxiety symptomatology, compared to placebo and control conditions.</p>

Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
<p>Chiu et al. (2013)</p> <p>To ascertain whether CBT-based support for children experiencing anxiety needs can be effective when delivered in school settings on an indicated basis.</p>	<p>Forty participants were recruited from two elementary schools in the United States. The participant sample was considered to be ethnically diverse, consisting of 16 Caucasian participants (40%), six African-America (15%); two Asian (5%), seven Hispanic (17.5%) and nine as dual heritage (22.5%). Participants were aged</p>	<p>The 'Building Confidence' programme</p>	<p>Doctoral students in clinical or educational Psychology.</p>	<p>Yes: waitlist comparison group</p>	<p>RCT comparison study</p>	<p>The Multidimensional Anxiety Scale for Children (MASC; March, 1998) – child report</p> <p>The Child Behavior Checklist (CBCL; Achenbach,1991) – parent-report.</p>	<p>Participants in the CBT group experienced greater reductions in parent-reported levels of anxiety, in addition to reporting marginally greater reductions in their self-report measure of anxiety.</p> <p>95% of the CBT group made positive post-intervention improvements and were considered 'diagnosis-free', compared to 16.7% of participants in the wait-list condition.</p>

	between 5 and 12 years of age.						
Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
<p>Miller et al. (2011).</p> <p>To evaluate the efficacy of the 'FRIENDS' CBT intervention for reducing children's symptoms of anxiety.</p>	Participants from 17 schools in Canada (191 children, mean age 10.1yrs).	FRIENDS	Trained member of school staff plus researcher	Yes: attention control	RCT comparison study	<p>The MASC (Multidimensional Anxiety Scale for Children, March; 1997)</p> <p>The BASC (Behavioural Assessment System for Children, Reynolds and Kamphaus, 1992) – parent and teacher report.</p>	Results indicated no significant intervention effects over the course of this study.

Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
<p>Bernstein et al (2005)</p> <p>To examine the use of indicated CBT support in a school setting in the United States.</p> <p>To explore the possible benefits of incorporating a parental training component to child-orientated CBT support.</p> <p>To explore group CBT for children and group CBT</p>	<p>The authors sought consent from 1,037 second to fifth grade students, with a response rate of 78% (n=809) yielding an agreement from 61% of parents (n = 497) for their children to be considered for study participation.</p> <p>In all, 61 participants were enlisted for the final study sample (aged 7-11 years).</p>	FRIENDS	<p>Trained CBT therapist plus Co-therapists (i.e. graduate students</p> <p>and interns, both from doctoral-level psychology programs).</p>	Yes	RCT	<p>Screen for Child Anxiety Related Emotional Disorders (SCARED, Birmaher et al., 1999)</p> <p>Clinical Global Impressions (CGI, Guy, 1976).</p> <p>The Multidimensional Anxiety Scale for Children (MASC; March et al., 1997)</p> <p>Disorders Interview Schedule (ADIS) for DSM-IV, Child of Parent versions</p>	<p>Comparisons of pre/post-intervention data indicated that the percentage of participants meeting diagnostic criteria for anxiety disorders reduced from 82% (pre-intervention) to 29% (post-intervention) for the CBT-only participants.</p> <p>Participants in the CBT plus parent training demonstrated a reduction from 80% (pre-intervention) to 33% (post-intervention).</p> <p>The progress of intervention groups was in stark contrast to that of the control condition which ranged from 67% (pre-intervention) to 46% (post-intervention).</p>

plus parent support/training with a control condition.						(Silverman and Albano, 1996)	Chi-square analyses indicated that significantly more children with DSM-IV anxiety diagnoses pre-intervention from the combined CBT groups moved to non-diagnostic status compared to participants from the control group. When the CBT groups were inspected in finer detail, significantly more children moved to non-diagnostic status in the CBT-only condition than in the control condition. However contrary to the initial experimental hypotheses; there were no significant differences between CBT plus parenting condition participants and control participants following similar comparisons. On the basis of this data alone,
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							<p>CBT-only could be perceived to be more efficacious than CBT plus parental training for reducing participants' anxiety needs. However, other measures (i.e. CGI and parent-report MASC scores), indicate that CBT plus parent training participants showed considerably more progress than control participants, whilst the same could not be said for CBT-alone participants when compared to the no-treatment control condition.</p>
Study and aims	Sample	Intervention	Intervention leaders	Control group	Design	Measures	Outcomes and Conclusions
Rodgers and Dunsmuir (2013).	62 participants (19 male) from a socially disadvantaged	FRIENDS for Life	Lead author (Chartered Educational and Child	Yes	RCT with a wait-list control condition	Spence Children's Anxiety Scale (SCAS; Spence,	Overall anxiety needs were significantly reduced for intervention condition participants,

<p>To investigate the impact of the 'FRIENDS for Life' intervention, delivered in a school setting, on both 'overall anxiety' and also the spectrum of anxiety subtypes as detailed in the DSM-IV.</p> <p>To investigate the relationship between anxiety and school adjustment.</p>	<p>area of Ireland. Participants were in their first year of secondary schooling in Ireland (i.e. aged between 12 and 13 years).</p>		<p>Psychologist)</p>			<p>1997)</p> <p>Spence Children's Anxiety Scales for Parents (SCAS-P; Spence, 1997)</p> <p>The Child Rating Scale (CRS; Perkins and Hightower, 2002)</p> <p>Teacher-Child Rating Scale (T-CRS 2.1; Perkins and Hightower, 2002).</p>	<p>compared to control participants.</p> <p>CBT support produced a significant reduction in separation anxiety needs for intervention condition participants, compared to control participants.</p> <p>Parents of intervention condition participants reported significantly lower student anxiety needs, post-intervention, compared to parents of control condition participants.</p> <p>There were no interaction effects (group x time) for school adjustment ratings, post-intervention.</p>
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**7.4 Appendix 4 – Key information relating to the positivist/post-positivist, constructivist and pragmatic paradigms, adapted from MacKenzie and Knipe (2006; 199)**

Paradigm	Methods (Primarily)	Data collection tools (examples)
<b>Positivist/Post-Positivist</b>	<b><i>Quantitative methods:</i></b> “Although qualitative methods can be used within this paradigm, quantitative methods tend to be predominant...” (Mertens, 2005; 12).	<ul style="list-style-type: none"> <li>• RCTs</li> <li>• Quasi-experiments</li> <li>• Tests</li> <li>• Scales</li> </ul>
<b>Constructivist</b>	<b><i>Qualitative methods</i></b> predominate although quantitative methods may also be utilised.	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Observations</li> <li>• Document reviews</li> <li>• Visual data analysis</li> <li>• Focus groups</li> </ul>
<b>Pragmatic</b>	<b><i>Mixed methods approaches:</i></b> Qualitative and/or quantitative methods may be employed. Methods are matched to the specific questions and purpose of the research.	May include tools from both positivist and interpretivist (i.e. constructivist) paradigms. E.g. Interviews, observations and testing and experiments.

## 7.5 Appendix 5 – Ethics Approval Letter for the Current Study



The University of  
**Nottingham**

UNITED KINGDOM • CHINA • MALAYSIA

School of Psychology  
The University of Nottingham  
University Park  
Nottingham  
NG7 2RD

T: +44 (0)115 8467403 or (0)115 9514344

AS/hcf  
Ref: 323

27<sup>th</sup> June 2013

Dear Daniel Lake,

### **Ethics Committee Review**

Thank you for submitting an account of your proposed research 'An investigation into the impact of a selective CBT-based intervention on the anxiety of levels and coping abilities of secondary school pupils'.

That research has now been reviewed by the Ethics Committee and I am pleased to tell you that your submission has met with the committee's approval.

Final responsibility for ethical conduct of your research rests with you or your supervisor. The Codes of Practice setting out these responsibilities have been published by the British Psychological Society and the University Research Ethics Committee. If you have any concerns whatever during the conduct of your research then you should consult those Codes of Practice.

Independently of the Ethics Committee procedures, supervisors also have responsibilities for the risk assessment of projects as detailed in the safety pages of the University web site. Ethics Committee approval does not alter, replace, or remove those responsibilities, nor does it certify that they have been met.

Yours sincerely

Dr Alan Sunderland  
Chair, Ethics Committee

## 7.6 Appendix 6 – Initial letter to parents regarding student participation in the screening process

Dear Parent/Carer,

**Re. The ‘positive thinking programme’ - A Research Project on supporting students who may feel anxious in school.**

XXXX School will soon be running a series of small group sessions known as the ‘positive thinking programme’, designed to help students cope with any feelings of worry they may be experiencing at school. This programme will be part of a research study by the University of Nottingham and XXXX Educational Psychology Service.

All students carry anxieties at different points during their school lives, for a range of reasons and this is normal. However, some students may be experiencing additional worries which may have a negative impact on their school experience. ***It is hoped that by attending these support group sessions, students will receive support for those matters that they currently feel nervous or worried about.***

Research studies have shown that attending groups similar to the ‘positive thinking programme’ can help primary school students to overcome their worries. *This research study is interested in finding out whether the positive programme can also be beneficial for older students too.* All sessions will be delivered by school staff and will be supported by the Educational Psychology Service. ***Our aim is provide a supportive and enjoyable positive thinking group for those students who take part.***

Firstly, in order to find out which students may benefit from this extra support, we would like all students in your child’s year group to complete a short questionnaire. All students will be supported with completing these questionnaires by their teachers and student’s answers will be kept **strictly confidential** – this means that only teachers will see these forms.

Secondly, we would then like to share your child’s answers to the questionnaire with the researcher, to find out whether your son/daughter may benefit from some extra support from the positive thinking programme.

If you ***and*** your child **do not agree** to **all** of the following, please complete the **opt-out consent form** attached to this letter to say that you do not agree for:

- (i) Your son/daughter completing the screening questionnaire, and;
- (ii) School to share your son/daughter’s scores with the researcher.

**If your child's answers suggest that they may benefit from this support, we will write to you again to ask for your consent for your child to attend the group sessions in the autumn term.**

**Please note: all consent slips must be returned to xxxx school reception by no later than xx/xx/xx.**

To help you decide whether you are happy for your child to take part in this project, we have included a 'Positive Thinking Programme Overview' with this letter, to tell you more about this project. You are also invited to attend a parents evening, to learn more about the 'Positive Thinking Programme'. This will take place at **3.30pm** on **xx/xx/xx**, in the **Lower School Hall** at **XXXX School**.

If you have any further concerns, please contact; Alan Sunderland (Ethics Committee Chair) [alan.sunderland@nottingham.ac.uk](mailto:alan.sunderland@nottingham.ac.uk)

Yours Sincerely,

XXXXXXXXXX

Head Teacher

XXXX School

Dan Lake

Trainee Educational Psychologist

XXXX Educational Psychology Service

## 7.7 Appendix 7 – Parent information sheet regarding the study

### University of Nottingham School of Psychology

#### Information Sheet for parents

#### Research Project on *supporting children who may feel anxious in school*

**Researcher: Dan Lake (Trainee Educational Psychologist at XXXX Educational Psychology Service)**

#### **Contact Details:**

*Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>*

*Postal address removed*

This is an information sheet about the 'Positive Thinking Programme' – a small group programme taking place at XXXX School, intended to support children who may be feeling worried or anxious. This programme will be part of a research study by the University of Nottingham and XXXX Educational Psychology Service.

Before you decide if you wish for your son/daughter take part in this study, it is important for you to understand why the research is being done and what it will involve. ***Please take time to read the following information carefully.***

If you agree, and if their scores on the screening questionnaire indicate that they may benefit from some extra support with managing worries, your child will have the opportunity to attend a support group known as the 'Positive Thinking' group. A small number of students will be invited to join the group and these sessions will help children to understand any worries they may be experiencing at the moment. Children will also be provided with strategies to help them cope with challenges in the future.

All children carry anxieties at different points during their school lives, for a range of reasons and this is normal. However, some students may be experiencing additional worries which may have a negative impact on their school experience.

Research studies have shown that children at primary school can make really encouraging progress by attending groups similar to the 'Positive Thinking Programme'. *This research study is interested in finding out whether the positive programme can also be beneficial for older children too.* Our aim is provide a supportive and enjoyable positive thinking group for those children who take part.

If your child takes part in for the programme they will be asked to complete three more questionnaires, one before the programme begins and two more at the end of

the programme. We also ask that you complete a brief questionnaire, which asks for your views about any worries you feel your child may be experiencing. These questionnaires will help us to measure how helpful this programme is for your child and we will send this questionnaire to you before the programme begins and again, when the programme has finished.

If your child is selected for the groups the whole intervention programme will last for 6 weeks. Each child selected will be invited to join one session a week, which will last up to one hour. These sessions will be run by xxxx school's Teaching Assistants.

Children will be invited to either group A or group B. Group A will work in a group for 6 weeks, followed by children in group B then doing the same after group A have finished. Both groups of children will receive **exactly** the same type and level of support. Whilst waiting for their group to start, children in group B will receive 'usual school support'. In other words, children in group B will attend their normal lessons and will be entitled to the range of high-quality support typically available to all students in school, to ensure that they receive support for any additional needs they may have during this time. You will have the chance to discuss this further via a meeting with the researcher – more information about this is provided at the end of this letter.

All children in the groups will also be invited to a one-off 'focus group' at the end of the programme, with the other students that attended the sessions. The children will have the chance to talk about how useful they found the programme, which parts they enjoyed and which parts they may have wanted to change in any way.

Participation in this study is totally voluntary and your child is under no obligation to take part. They will be free to opt out of any conversations or activities that they do not want to be a part of and you are free to withdraw your child from this programme at any point before or during the study. All questionnaires will **only** be used for research purposes and to inform yourself as parents about your child's progress. All data will also be kept confidential unless a safeguarding issue is raised, at which point the teaching assistants will follow typical school procedures.

You are also invited to attend a parents' evening to learn more about this research study and the 'Positive Thinking Programme'. The information available during this evening will help you to decide if you are happy for your son/daughter to take part in the programme and study.

The parents' evening will take place at **Xxxx School** in the **lower school hall**, from **3.30pm** on **xx/xx/xx**. Dan Lake (Researcher) will provide a presentation on the study and xxxxxx (SENCo) and xxxxxx (Associate SENCo) will also be present.

**PLEASE NOTE – If you DO NOT agree for your son/daughter to complete the screening questionnaire, please complete the PARENT and STUDENT consent slips attached.**

***Consent slips will need returning to XXXX school reception as soon as possible and by xx/xx/xx at the latest.***

## 7.8 Appendix 8 – Student information sheet regarding the study

### **Information Sheet for students: The Positive Thinking Programme**

**Researcher: Dan Lake (Trainee Educational Psychologist at XXXX Educational Psychology Service)**

This is an information sheet about the 'Positive Thinking Programme' – a small group programme taking place at XXXX School, to help children who may be feeling worried. This programme will be part of a research study by the University of Nottingham and XXXX Educational Psychology Service.

Before you decide if you want to take part, ***please take time to read this information carefully and discuss this with an adult if you have any questions.***

If you agree, you will be asked to complete a questionnaire which will ask you questions about feeling worried. Everybody feels worried at times, for many different reasons and this is normal. Your answers on this questionnaire will help adults at school to support you as much as possible. You may even have the chance to come to some small group sessions, as part of the 'Positive Thinking' group, if you agree to this too.

IF you are invited to these sessions *and* you agree to take part, staff at Xxxx School will provide you with a supportive and enjoyable group. All group sessions will be run by teaching assistants from Xxxx School. The group will involve working with the group leaders and other children to think about what you can do and who you can talk to when you feel worried.

At the end of the Positive Thinking Programme, you will also be invited to a 'focus group' with the other students that attended the sessions. This group will give you the chance to talk about how useful the programme was and which activities you enjoyed.

You do not have to take part in any conversations or activities that you do not want to be a part of and you are free to leave the group at any point before or during the study. Your answers on the questionnaires will be used **only** for:

- Helping school staff and the researcher to understand how useful the Positive Thinking Programme is for supporting children who may feel worried and;
- Providing you and your parents with a summary of the programme afterwards.

You and your parents/carers are also invited to attend a parents' evening to learn more about this research study and the 'Positive Thinking Programme'. You will also have the chance to meet the group leaders and ask any questions you might have!

**IF YOU DO NOT AGREE TO TAKE PART IN THIS STUDY, PLEASE ASK YOUR PARENTS TO COMPLETE THE CONSENT SLIP INCLUDED IN THIS LETTER.**

***Consent slips will need returning to XXXX school reception as soon as possible and by xx/xx/xx at the latest.***

***Thank you!***

***Researcher's contact details:***

*Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>*

*Postal address removed.*



## 7.9 Appendix 9 – Parental opt-out of screen consent form

### **The Positive Thinking Programme:**

#### **‘Opt out’ consent form for the screening questionnaire only**

I am signing this form to state that I **do not** give consent for my child to take part in the **screening measure** for the Positive Thinking Programme at XXXX school.

My child's name is: \_\_\_\_\_ (insert child's name) and by signing this form, I understand that my child **will not**:

Complete the initial questionnaire, given to all students in their year group.

Attend any of the six group sessions.

Signed: \_\_\_\_\_  
(Parent/carer – delete as appropriate).

Date: \_\_\_\_\_

***Consent slips will need returning to XXXX school reception as soon as possible and by xx/xx/xx at the latest.***

## 7.10 Appendix 10 – Parent Information Evening Handout

### Positive Thinking Programme Overview

#### **Background**

This programme provides support for those students who maybe experiencing worries or anxiety in school. The aim of the programme is to support students with understanding their worries and to introduce the students to several coping strategies to help them manage any worries they may have in future.

This programme uses an approach known as Cognitive Behaviour Therapy (CBT); this approach is explained in more detail below.

#### **Structure**

The programme includes six sessions in total, with one session per week. Each session will last up to one hour. This intervention will support a small group of students and sessions will be delivered by teaching assistants from XXXX school. Students will be given the opportunity to work on a range of shared activities to encourage students to support each other. Students will also be provided with home work tasks between sessions.

#### **Rules**

In order to ensure that the students feel safe within the sessions, a number of rules are introduced at the beginning of the first session. These rules will then be repeated at the beginning of each session and will be put on a poster for the entire group to see. These rules include:

- **We listen to each other and take it in turns to speak:**  
*So it is important that you all feel confident to talk and that everyone is listening to you.*
- **We treat each other as we would like to be treated.**
- **We respect each other's opinions.**
- **Confidentiality:**  
*We only talk about these things with the people in this group; we don't discuss these issues outside of this group. Unless you want to tell people at home of course! So what you tell me in here will stay private, **unless** you tell me something about you, or someone else, being hurt or unsafe, in which case I will have to tell some other people to make sure you stay safe and unhurt.*

It is important that the students are made aware that they are in no way obliged to contribute if they did not feel comfortable to do so, and that attendance is not compulsory.

#### **The Use of Cognitive Behavioural Therapy Techniques**

Cognitive Behaviour Therapy focuses on the relationship between the following:

- Our thoughts - what we think
- Our emotions - how we feel, and;
- Our behaviour - what we do.

Our thoughts, feelings and behaviour all interact with one another, for example:

A child may not want to go to their maths lesson because they find Maths difficult and they think they are rubbish at maths (their thoughts - what they think). They might then become worried about the math lesson and start to feel upset about the thought going to the lesson (their emotions – what they feel). The child may become so anxious to the point that they become emotional and have miss their lesson as a result of needing time to calm down (behaviour – what they do). The child has then avoided going to their Maths lesson due to their anxiety. When this happens, they may think their next maths lesson is going to be even harder, because they missed this first lesson. As a result, they could become worried about their next lesson and the cycle starts again.

This means that it is really important for students to think about:

- What causes them to feel worried?
- Which strategies they could use to help them keep calm, or
- Which strategies they could use to calm down, if they have become upset.

### **Session contents**

The following is a brief summary of what each of the sessions will include.

**Session one** – the first session should act as an introduction to the programme. The idea of this session is to allow the students to bond, whilst introducing them to the structure of the programme and rules. There will be a focus on finding out what the students like, enjoy and are good at. Importantly, students will also need to think about they worry may about.

**Session two** – the second session will be used to teach students about how their thoughts, feelings and behaviour are all linked. Students will be asked to think about how they know when they are feeling worried. In other words, what does their body tell them? Do they feel hot, do they get butterflies in their stomach, do their hands become shaky?

This session should also involve the students considering who they feel they could turn to for support.

**Session three** – the third session will introduce the ‘thinking errors’. These are a range of negative thoughts that might cause us to worry a little bit more than is necessary. Students will be asked to look out for these errors in future.

**Session four** – the fourth session will introduce students to strategies used to control their thoughts, otherwise known as positive thinking! These strategies will help students to keep calm in situations which may otherwise cause them to worry. Practising these strategies should help students to feel calmer in future.

Students will also be introduced to 'balanced thinking'. Balanced thinking is about spotting when we might be making the thinking errors (introduced in session three) and looking for evidence to contradict our worries.

**Session five** – the fifth session will focus on 'controlling your feelings' and will introduce a number of strategies which will help students to calm themselves down when they have become upset.

Students will be work through some examples of characters becoming upset. They will be encouraged to think about what strategies these characters could have used to stay calm, or to calm down after becoming upset. Students will be taught some relaxation strategies in this session too.

**Session six** – the final session should be used to recap all the content covered by previous sessions and should be used as a form of celebration and graduation for those students within the group.

This session should explain to the students that dwelling on negative thoughts can cause them to develop further. The students could also consider activities which they enjoy doing the cheer themselves up.

## **7.11 Appendix 11 - Letter to parents indicating that intervention participation was not needed at this time**

Dear <insert parents names>

**The 'Positive Thinking Programme' - A Research Project on supporting students who may feel anxious in school.**

Thank you for providing permission for your son/daughter to complete the screening measure for the 'Positive Thinking Programme' at XXXX school.

I am writing to let you know that your son/daughter's answers on this questionnaire do not indicate any early signs of anxiety needs, at this time. As such, it is not felt necessary for your son/daughter to attend the 'Positive Thinking Programme' group sessions at XXXX School.

If you have any future concerns about your child's anxiety needs, please bring these to the attention of your son/daughter's form tutor for further support.

If you have any further questions about this process please contact me via the details below.

Yours sincerely,

Dan Lake

Trainee Educational Psychologist

XXXX Educational Psychology Service

University of Nottingham

Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>

Postal address removed.

## 7.12 Appendix 12 - Letter to parents requesting consent for intervention participation

Dear <insert parents names>

**The 'Positive Thinking Programme' - A Research Project on supporting students who may feel anxious in school.**

Thank you for providing permission for your son/daughter to complete the screening measure for the 'Positive Thinking Programme' at XXXX School.

Your son/daughter's answers on this questionnaire indicate that they may benefit from some extra support with worries, at this time. If you **agree** for your child to attend the 'Positive Thinking Programme' group sessions at XXXX School, please complete the **parent and student consent slips** attached and return these to **xxxx school reception** by **xx/xx/xx** at the latest.

If you have any further questions about this process please contact me via the details below.

Yours sincerely,

Dan Lake  
Trainee Educational Psychologist  
XXXX Educational Psychology Service  
University of Nottingham

Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>  
Postal address removed.

## **7.13 Appendix 13 – Parent opt-in to intervention consent form**

### **PARENT CONSENT FORM**

#### **The ‘positive thinking programme’ - A Research Project on supporting students who may feel anxious in school.**

**Investigator: Dan Lake**

**School of Psychology, University of Nottingham**

The parents of the participant should complete the whole of this sheet, with the child as necessary. Please cross out as necessary:

Have you, as parents, been provided with the researchers contact details so that you may ask any questions and discuss the study  
YES/NO

Have you, as parents, been provided with the opportunity to attend a parents’ evening to find out about the ‘positive thinking programme’ and the research study?  
YES/NO

Have all your questions been answered satisfactorily  
YES/NO

Have you received enough information about the study  
YES/NO

Have you received enough information about the timings of Group A and Group B?  
YES/NO

Do you understand that you are free to withdraw your child from the study:

at any time  
YES/NO

without having to give a reason  
YES/NO

**Do you agree for your child to take part in the study and the Positive Thinking Programme group sessions?**  
YES/NO

"This study has been explained to me to my satisfaction, and I agree for my child to take part. I understand that I am free to withdraw my child at any time."

Signature of the Parents:

Date:

Name (in block capitals):

I have explained the study to the above participant and he/she has agreed to take part.

Signature of Researcher:

Date:



## **7.14 Appendix 14 - Student consent form for intervention participation**

### **MY STUDENT AGREEMENT FORM**

#### **The 'positive thinking programme'**

**Investigator: Dan Lake**  
**School of Psychology, University of Nottingham**

The participant should complete the whole of this sheet, with help from parents or teachers as required. Please cross out as necessary:

Have you read the student information sheet? Did you understand this sheet?  
YES/NO

Have you been given the chance to ask your teachers or the researcher any questions you may have about the information sheet and the positive thinking programme?  
YES/NO

Have all your questions been answered? Are you happy with the answers you were given?  
YES/NO

Have you received enough information about the study?  
YES/NO

Do you understand that you are free to withdraw from any activities in the sessions of from the entire study:

at any time?  
YES/NO

without having to give a reason?  
YES/NO

**Do you agree to take part in the Positive Thinking Programme?**  
YES/NO

"This study has been explained to me, and I agree to take part. I understand that I am free to withdraw at any time."

Signature of the Participant:

Date:

Name (in block capitals)

I have explained the study to the above participant and he/she has agreed to take part.

Signature of Researcher:

Date:

## 7.15 Appendix 15 - Letter regarding inclusion in experimental condition

Dear <insert parents names>

### **The 'positive thinking programme' - A Research Project on supporting children who may feel anxious in school.**

Thank you for providing permission for your son/daughter to attend the positive thinking programme at XXXX school. The whole intervention programme will last for 6 weeks, starting on xxxx. Your son/daughter will join one small-group session per week, which will last up to one hour. These sessions will be run by Teaching Assistants.

Your child has been included in group A; the first group to receive intervention support. Once they have completed the programme you will be provided with written information about their participation and provided with the opportunity to discuss this information. Both Group A and Group B receive **exactly** the same type and level of support, with the only difference being that group B start the programme 6 weeks later than group A.

A questionnaire is included with this letter, this questionnaire provides you with the opportunity to give your views on any worries your child may be experiencing at the moment. I would be grateful if you could complete this questionnaire and return it to XXXX school reception by (date). Your answers to this questionnaire help us to further understand your child's needs and how to support these.

If you have any further questions or would like any further information about this programme, research study or the questionnaire included with this letter, please contact myself directly, via the email address or telephone number below.

Yours sincerely,

Dan Lake  
Trainee Educational Psychologist  
XXXX Educational Psychology Service  
University of Nottingham

Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>  
Postal address removed.

## 7.16 Appendix 16 - Letter regarding inclusion in wait-list condition

Dear <insert parents names>

**The 'Positive Thinking Programme' - A Research Project on supporting students who may feel anxious in school.**

Thank you for providing permission for your son/daughter to attend the positive thinking programme at XXXX school.

Your child has been included in **group B**; and their intervention programme will last for 6 weeks starting on xx/xx/xx. Your son/daughter will join one small-group session per week, which will last up to one hour. These sessions will be run by Teaching Assistants.

Both Group A and Group B receive **exactly** the same type and level of support, with the only difference being that group B start the programme 6 weeks later than group A. Up until (**start date**) your child will attend their timetabled lessons as normal. If Xxxx School have previously informed you of any additional support or interventions that your child is a part of, they will continue to have their needs met via access to this support also.

Once your son/daughter has completed the programme, you will be provided with written information about their participation and provided with the opportunity to discuss this information with the researcher.

A questionnaire is included with this letter, this questionnaire provides you with the opportunity to give your views on any worries your child may be experiencing at the moment. Please complete this questionnaire and return it to XXXX school reception by (date). Your answers to this questionnaire help us to further understand your child's needs and how to support these.

If you have any further questions or would like any further information about this programme, research study or the questionnaire included with this letter, please contact myself directly, via the email address or telephone number below.

Yours sincerely,

Dan Lake  
Trainee Educational Psychologist  
XXXX Educational Psychology Service  
University of Nottingham

Tel: XXXX / E-mail: <INSERT EPS OFFICE EMAIL>  
Postal address removed.

## 7.17 Appendix 17 – Spence Children’s Anxiety Scale (SCAS) introductory script for teachers

### Spence Children’s Anxiety Scale

#### About the scale (for staff only):

The scale assesses six domains of anxiety including generalized anxiety, panic/agoraphobia, social phobia, separation anxiety, obsessive compulsive disorder and physical injury fears. It is designed to be relatively easy and quick for children to complete, normally taking only around 10 minutes to answer the questions. Young people are asked to rate the degree to which they experience each symptom on a 4-point frequency scale.

Children are asked to rate on a 4 point scale involving never (0), sometimes (1), often (2), and always (3), the frequency with which they experience each symptom. The instructions state "Please put a circle around the word that shows how often each of these things happen to you. There are no right and wrong answers".

#### Instructions for students:

- We would like you to complete a questionnaire, *if* you are happy to do so. This questionnaire asks students to think about any worries they may have at the moment.
- Everybody feels worried from time to time, even teachers and adults and this is perfectly normal. This questionnaire will help us, as teachers, to decide whether you need any extra support to help you feel less worried in school, in future.
- The questionnaire is being completed by each tutor group in year 8.
- Please keep your answers to yourself and do not look at anyone else’s questionnaire.
- If you need any help with understanding a question, put your hand up and we will help you.
- If your answers to your questionnaires suggest that you may need a little extra help with managing your worries in future, we will tell you in private at a later date.
- *If* you are not happy to complete this questionnaire, please let us know now. Once you have started you can also stop early, at any point – if you decide you do not want to continue.
- "Please put a circle around the word that shows how often each of these things happen to you. There are no right and wrong answers".
- *Read through the first question with the class, to ensure they understand the question and answer system.*
- *Read as many of the following questions to the class as you deem necessary.*

#### At the end:

- Does anyone have any questions they want answering? Please let us know these so that we can provide you with more information soon.

- If you have taken part, are you still happy for teachers to see your questionnaires or would like to withdraw your answers now? If you withdraw your answers no one will see these, not even teachers.

## 7.18 Appendix 18 – Spence Children's Anxiety Scale – children's version (SCAS, Spence, 1998)

### SPENCE CHILDREN'S ANXIETY SCALE

Your Name:  Date: \_\_\_\_\_

PLEASE PUT A CIRCLE AROUND THE WORD THAT SHOWS HOW OFTEN EACH OF THESE THINGS HAPPEN TO YOU. THERE ARE NO RIGHT OR WRONG ANSWERS.

1. I worry about things.....	Never	Sometimes	Often	Always
2. I am scared of the dark.....	Never	Sometimes	Often	Always
3. When I have a problem, I get a funny feeling in my stomach.....	Never	Sometimes	Often	Always
4. I feel afraid.....	Never	Sometimes	Often	Always
5. I would feel afraid of being on my own at home.....	Never	Sometimes	Often	Always
6. I feel scared when I have to take a test.....	Never	Sometimes	Often	Always
7. I feel afraid if I have to use public toilets or bathrooms.....	Never	Sometimes	Often	Always
8. I worry about being away from my parents.....	Never	Sometimes	Often	Always
9. I feel afraid that I will make a fool of myself in front of people.....	Never	Sometimes	Often	Always
10. I worry that I will do badly at my school work.....	Never	Sometimes	Often	Always
11. I am popular amongst other kids my own age.....	Never	Sometimes	Often	Always
12. I worry that something awful will happen to someone in my family.....	Never	Sometimes	Often	Always
13. I suddenly feel as if I can't breathe when there is no reason for this....	Never	Sometimes	Often	Always
14. I have to keep checking that I have done things right (like the switch is off, or the door is locked).....	Never	Sometimes	Often	Always
15. I feel scared if I have to sleep on my own.....	Never	Sometimes	Often	Always
16. I have trouble going to school in the mornings because I feel nervous or afraid.....	Never	Sometimes	Often	Always
17. I am good at sports.....	Never	Sometimes	Often	Always
18. I am scared of dogs.....	Never	Sometimes	Often	Always
19. I can't seem to get bad or silly thoughts out of my head.....	Never	Sometimes	Often	Always
20. When I have a problem, my heart beats really fast.....	Never	Sometimes	Often	Always
21. I suddenly start to tremble or shake when there is no reason for this...	Never	Sometimes	Often	Always
22. I worry that something bad will happen to me.....	Never	Sometimes	Often	Always
23. I am scared of going to the doctors or dentists.....	Never	Sometimes	Often	Always
24. When I have a problem, I feel shaky.....	Never	Sometimes	Often	Always
25. I am scared of being in high places or lifts (elevators).....	Never	Sometimes	Often	Always

26. I am a good person.....	Never	Sometimes	Often	Always
27. I have to think of special thoughts to stop bad things from happening (like numbers or words).....	Never	Sometimes	Often	Always
28. I feel scared if I have to travel in the car, or on a Bus or a train.....	Never	Sometimes	Often	Always
29. I worry what other people think of me.....	Never	Sometimes	Often	Always
30. I am afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds).....	Never	Sometimes	Often	Always
31. I feel happy.....	Never	Sometimes	Often	Always
32. All of a sudden I feel really scared for no reason at all.....	Never	Sometimes	Often	Always
33. I am scared of insects or spiders.....	Never	Sometimes	Often	Always
34. I suddenly become dizzy or faint when there is no reason for this.....	Never	Sometimes	Often	Always
35. I feel afraid if I have to talk in front of my class.....	Never	Sometimes	Often	Always
36. My heart suddenly starts to beat too quickly for no reason.....	Never	Sometimes	Often	Always
37. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.....	Never	Sometimes	Often	Always
38. I like myself.....	Never	Sometimes	Often	Always
39. I am afraid of being in small closed places, like tunnels or small rooms.....	Never	Sometimes	Often	Always
40. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order).....	Never	Sometimes	Often	Always
41. I get bothered by bad or silly thoughts or pictures in my mind.....	Never	Sometimes	Often	Always
42. I have to do some things in just the right way to stop bad things happening.....	Never	Sometimes	Often	Always
43. I am proud of my school work.....	Never	Sometimes	Often	Always
44. I would feel scared if I had to stay away from home overnight.....	Never	Sometimes	Often	Always
45. Is there something else that you are really afraid of?.....	YES	NO		
Please write down what it is _____				
_____				
_____				
How often are you afraid of this thing?.....	Never	Sometimes	Often	Always



## 7.19 Appendix 19 – Spence Children’s Anxiety Scale – Parent version (SCAS-P, Spence, 1998)

### SPENCE CHILDREN’S ANXIETY SCALE (Parent Report)

Your Name:

Date: \_\_\_\_\_

Your Child’s Name:

BELOW IS A LIST OF ITEMS THAT DESCRIBE CHILDREN. FOR EACH ITEM PLEASE CIRCLE THE RESPONSE THAT BEST DESCRIBES YOUR CHILD. PLEASE ANSWER ALL THE ITEMS.

1.	My child worries about things.....	Never	Sometimes	Often	Always
2.	My child is scared of the dark.....	Never	Sometimes	Often	Always
3.	When my child has a problem, s(he) complains of having a funny feeling in his / her stomach .....	Never	Sometimes	Often	Always
4.	My child complains of feeling afraid.....	Never	Sometimes	Often	Always
5.	My child would feel afraid of being on his/her own at home.....	Never	Sometimes	Often	Always
6.	My child is scared when s(he) has to take a test.....	Never	Sometimes	Often	Always
7.	My child is afraid when (s)he has to use public toilets or bathrooms.....	Never	Sometimes	Often	Always
8.	My child worries about being away from us / me.....	Never	Sometimes	Often	Always
9.	My child feels afraid that (s)he will make a fool of him/herself in front of people.....	Never	Sometimes	Often	Always
10.	My child worries that (s)he will do badly at school.....	Never	Sometimes	Often	Always
11.	My child worries that something awful will happen to someone in our family.....	Never	Sometimes	Often	Always
12.	My child complains of suddenly feeling as if (s)he can't breathe when there is no reason for this.....	Never	Sometimes	Often	Always
13.	My child has to keep checking that (s)he has done things right (like the switch is off, or the door is locked).. .....	Never	Sometimes	Often	Always
14.	My child is scared if (s)he has to sleep on his/her own.....	Never	Sometimes	Often	Always
15.	My child has trouble going to school in the mornings because (s)he feels nervous or afraid.....	Never	Sometimes	Often	Always
16.	My child is scared of dogs .....	Never	Sometimes	Often	Always
17.	My child can't seem to get bad or silly thoughts out of his / her head.....	Never	Sometimes	Often	Always
18.	When my child has a problem, s(he) complains of his/her heart beating really fast.....	Never	Sometimes	Often	Always

19.	My child suddenly starts to tremble or shake when there is no reason for this.....	Never	Sometimes	Often	Always
20.	My child worries that something bad will happen to him/her.....	Never	Sometimes	Often	Always
21.	My child is scared of going to the doctor or dentist .....	Never	Sometimes	Often	Always
22.	When my child has a problem, (s)he feels shaky.....	Never	Sometimes	Often	Always
23.	My child is scared of heights (eg. being at the top of a cliff).....	Never	Sometimes	Often	Always
24.	My child has to think special thoughts (like numbers or words) to stop bad things from happening.....	Never	Sometimes	Often	Always
25.	My child feels scared if (s)he has to travel in the car, or on a bus or train .....	Never	Sometimes	Often	Always
26.	My child worries what other people think of him/her.....	Never	Sometimes	Often	Always
27.	My child is afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds).....	Never	Sometimes	Often	Always
28.	All of a sudden my child feels really scared for no reason at all.....	Never	Sometimes	Often	Always
29.	My child is scared of insects or spiders.....	Never	Sometimes	Often	Always
30.	My child complains of suddenly becoming dizzy or faint when there is no reason for this.....	Never	Sometimes	Often	Always
31.	My child feels afraid when (s)he has to talk in front of the class.....	Never	Sometimes	Often	Always
32.	My child's complains of his / her heart suddenly starting to beat too quickly for no reason .....	Never	Sometimes	Often	Always
33.	My child worries that (s)he will suddenly get a scared feeling when there is nothing to be afraid of.....	Never	Sometimes	Often	Always
34.	My child is afraid of being in small closed places, like tunnels or small rooms.....	Never	Sometimes	Often	Always
35.	My child has to do some things over and over again (like washing his / her hands, cleaning or putting things in a certain order).....	Never	Sometimes	Often	Always
36.	My child gets bothered by bad or silly thoughts or pictures in his/her head .....	Never	Sometimes	Often	Always
37.	My child has to do certain things in just the right way to stop bad things from happening .....	Never	Sometimes	Often	Always
38.	My child would feel scared if (s)he had to stay away from home overnight.....	Never	Sometimes	Often	Always
39.	Is there anything else that your child is really afraid of? .....	YES	NO		
	Please write down what it is, and fill out how often (s)he is afraid of this thing: .....	Never	Sometimes	Often	Always
	.....	Never	Sometimes	Often	Always
	.....	Never	Sometimes	Often	Always

## 7.20 Appendix 20 – Table of SCAS means

### Normative Data for Total SCAS Scores

Gender	Age Group Years	N	SCAS TOTAL SCORE	
			Mean	SD
Male	8 to 11	1172	<b>26.65</b>	15.98
	12 to 15	1214	<b>21.06</b>	14.83
	Males All Ages	2386	<b>23.81</b>	15.65
Female	8 to 11	1185	<b>34.02</b>	17.33
	12 to 15	1345	<b>27.88</b>	15.32
	Females All Ages	2530	<b>30.75</b>	16.57
Both Genders Combined	8 to 11	2357	<b>30.35</b>	17.07
	12 to 15	2559	<b>24.65</b>	15.46
	Total Sample	4916	<b>27.38</b>	16.50

Statistical analyses using ANOVA showed that there are significant differences across genders,  $F(1,4912) = 244.86$ ,  $p < .001$ , eta square = .05 and age,  $F(1,4912) = 167.29$ ,  $p < .001$ , eta square = .03. As can be seen from table above, girls scored higher than boys for the total score. For both boys and girls, total scores tended to decrease with age. It is important therefore to use separate norms for the older (12 – 15 years) compared to the younger age range (8-11 years) and for boys versus girls.

N.b. Information derived from: [www.scaswebsite.com](http://www.scaswebsite.com)

## 7.21 Appendix 21 – Letter to parents regarding Focus Group Participation

Dear Parent/Guardian,

**The ‘Positive Thinking Programme’ - A Research Project on supporting students who may feel anxious in school.**

Thank you for providing permission for your child to attend the Positive Thinking Programme at XXXX School. As a reminder, your child was included in **group A** and their group came to a close during the week beginning **XX/XX/XX**. Both Group A and Group B received **exactly** the same type and level of support, with the only difference being that group B started the programme 6 weeks later than group A.

Following this intervention, we would also like to ask for your permission for your son/daughter to attend a small focus group activity with the other children from the programme. This group activity will provide students with an opportunity to give their feedback on the programme as a whole; they will be able to provide feedback on those aspects of the programme which they enjoyed and/or found useful and those aspects of the programme which they would have changed in order to improve the intervention. This information is useful, as it will help us to improve the Positive Thinking Programme in future.

A consent form is attached, to allow you to provide permission for your son/daughter to take part in the focus group. Please return these in the envelope provided to **Mrs. XXXX** in the **XXXX Centre** by **XX/XX/XX**.

Anonymous summaries of our findings and the progress made by the Positive Thinking Programme groups will be circulated to parents, once all data has been collected.

If you have any further questions or would like any further information about this programme or research study, please contact myself directly, via the email address or telephone number below.

Yours sincerely,

Dan Lake  
Researcher  
University of Nottingham  
Tel: XXXX / E-mail: XXXX

## 7.22 Appendix 22 – Parent Information Sheet regarding Focus Group Participation

Dear Parent/Guardian of

**The ‘Positive Thinking Programme’ - A Research Project on supporting students who may feel anxious in school.**

This information sheet will provide you with further details about the Focus Group session taking place at XXXX School. This session will provide students with the opportunity to discuss:

- a) How they felt the programme went
- b) What they felt they gained from attending the sessions, and
- c) What they would change about the programme, in order to improve it.

This session will:

- Be taking place on **XX/XX/XX, periods 1 and 2.**
- Be delivered by myself, the researcher.
- Take place in a quiet classroom in school.
- Involve a small group of students (expected to be between 4-5 students).
- Last for no more than a double lesson and may well be much shorter than this.

Discussions during this session will be recorded using a tape recorder. Students’ responses will also be recorded as written notes, taken by the researcher. Students’ responses will be recorded so that we can capture the range of feedback they provide within the group discussion as accurately as possible.

Tape recordings and students’ responses will be kept confidential at all times and only the researcher will have access to these. The tape recordings and written notes will be stored securely at the Educational Psychology Service and safely destroyed following completion of the research project.

If you have any further questions or would like any further information about either the focus group or research study, please contact myself directly, via the email address or telephone number below.

Yours sincerely,

Daniel Lake  
Researcher  
University of Nottingham  
Tel: XXXX / E-mail: XXXX

## 7.23 Appendix 23 – Parent Consent Form regarding Focus Group Participation

### **The Positive Thinking Programme:**

#### **Parent/Guardian consent form for the focus group**

My child's name is: \_\_\_\_\_ (insert child's name).

**Do you agree for your son/daughter to attend a focus group, which will provide students with an opportunity to give their feedback on the Positive Thinking Programme?**

YES / NO

Your Name: \_\_\_\_\_  
(Parent/Guardian – delete as appropriate).

Your signature: \_\_\_\_\_

Date: \_\_\_\_\_

***Consent slips will need returning to Mrs XXXX, in the Development Centre at XXXX School as soon as possible and by XX/XX/XX at the latest.***

Please note - If you have any further concerns about this research, please contact; Alan Sunderland (Ethics Committee Chair at the University of Nottingham) via email at: [alan.sunderland@nottingham.ac.uk](mailto:alan.sunderland@nottingham.ac.uk)

## **7.24 Appendix 24 – Student Information Sheet regarding Focus Group Participation**

### **The Positive Thinking Programme – Focus Group**

Dear student,

Thank you for taking part in the Positive Thinking Programme, we hope that you enjoyed being part of the group!

You are now invited to take part in a focus group at XXXX School. A focus group is a discussion group where people share ideas about something they have in common.

If you agree to take part, you will attend a session with the other students from your Positive Thinking group and this will be your chance to tell us what you thought about the Positive Thinking Programme. You will meet with me, the researcher, and we will have the chance to talk about:

Whether you enjoyed the programme

Whether you found the programme useful

What you liked best about the programme, if anything

What you would change about the programme, to improve it, if anything.

Your answers in this session will be kept confidential – this means that only the researcher and the other students in your group will hear them, unless you say anything giving concern for your safety and wellbeing, meaning I would need to tell someone else. There are no right or wrong answers and you will only have to answer those questions that you want to.

Your parents/guardians have agreed for you to attend the focus group, if you want to. If you do want to take part in this session, then you will need to complete the student consent slip.

If you have any other questions, please let me know.

Dan Lake

Researcher

University of Nottingham

## **7.25 Appendix 25 - Student Consent Form Regarding Focus Group Participation**

### **The Positive Thinking Programme:** **Student consent form for the focus group**

My name: \_\_\_\_\_

My form group: \_\_\_\_\_

Date: \_\_\_\_\_

**Have you been given the chance to ask the researcher any questions you may have about the focus group?**

YES / NO

**Are you happy with the answers you were given?**

YES / NO

**Have you received enough information about the focus group?**

YES / NO

**Are you happy for your answers in the session to be recorded on a tape? All tape recordings will be kept confidential and will be safely destroyed at the end of the research project.**

YES / NO

**Do you understand that you are free to withdraw from any activities in the focus group or from the entire focus group:**

At any time? YES / NO

Without having to give a reason? YES / NO

**Do you agree to take part in the focus group?**

YES / NO

Please note - If you have any further concerns about this research, please contact; Alan Sunderland (Ethics Committee Chair at the University of Nottingham) via email at: [alan.sunderland@nottingham.ac.uk](mailto:alan.sunderland@nottingham.ac.uk)



## 7.26 Appendix 26 – The Positive Thinking Programme Focus Group Transcript

No	Who	Comment	Coding
1.	DL	<b>Question 4 - When you are feeling worried or anxious, what helps you to cope?</b>	
2.	A	You speak to someone and then they could give you advice.	1, 2, 3
3.	DL	So who might you speak to...?	
4.	A	Either my mum or friends.	1, 2
5.	DL	Okay. If you were feeling worried in school, who might you talk to?	
6.	A	Um – probably my form tutor.	3
7.	DL	Okay, Okay, so that is one thing then. You have said you might turn to certain people at home or you might turn to certain people at school. What other things could you do if you are feeling worried? What other things could you try?	
8.	A	You could think how to make it better. If you have a problem you could think what you have to do to try and solve it.	6
9.	DL	Ah that's interesting – could you tell me a little bit more about that. What would you do?	
10.	A	Like say if you had a problem with your friend you would think about what you were going to say and then go in the next day and speak to them and try and get it sorted. It's really hard to explain.	6, 2
11.	DL	Ah – it sounds like it's a bit of a plan, does it not?	
12.	A	Mmm...	

13.	DL	So tell me if I am right here – am I hearing that you might try and plan ahead?	
14.	A	Yes, like when I have, say I've had a problem with my friends, I talk to myself. That might sound really weird but I try and plan out what I am going to say.	6, 10
15.	DL	Okay – we actually talked about that in the sessions didn't we? The positive self talk and actually think about what we can do. Thank you. Anybody else in the group got anything to say? What do you do if you are feeling worried?	
16.	B	Sleep	4
17.	DL	Yeah, okay – tell me more about that.	
18.	B	Cause then you can like rest and think about this or you can have a happy dream and then you feel happy and less worried.	4
19.	DL	Okay and would you say you try that often?	
20.	B	No – but sleeping makes you feel relaxed... or listening to calm music	4, 12
21.	DL	Ah listening to calm music – is that something that makes you feel relaxed as well	
22.	B	I always do that (slight giggling in background)	12
23.	DL	What sort of music?	
24.	B	Well I have got this app on my phone it has beach noises and stuff	12

25.	DL	Ah that's a good suggestion, thank you. Does anybody else have anything they try to help them feel relaxed?	
26.	C	Erm... like take a deep breath and calm down and then do something you enjoy.	8
27.	DL	Right okay, what things might you enjoy	
28.	C	Um like go on the ipad or something	13
29.	DL	Ah, go on the lpad, now that's quite a popular one. Does anyone else go on the lpad?	
30.	B	I don't have an lpad	23
31.	DL	No I don't have an lpad either So we have talked about doing something that you enjoy and taking deep breaths, and then focusing on something you enjoy. We've talked about breaking it down into a plan, making things step-by-step and also we talked about just preparing what you are going to say and practising, is that right?	
32.	B	Yeah	
33.	DL	Is there anything else that you do that helps you when you are feeling worried?	
34.	B	You can eat food	9
35.	DL	How does eating food help?	
36.	A	Like, you just get, like something really fattening then you eat it and then after you think "oh why did I eat that?" And then like and then you help around the house to burn it off and then it takes your mind off it.	9
37.	DL	Yeah	

38.	B	Yes if you like have a problem like a test or something and then you think you have done terrible and then you like eat and then you think of something else like AAAA said then you burn off the calories.	9
39.	DL	I really like that suggestion BBBB, Is there anything else that you might do to take your mind off things?	
40.	A	Yes, I take it out on my sister.	5
41.	DL	You take it out on your sister?	
42.	A	Yes, 'cos she understands me, like, I get really angry really quickly so I take it out on my sister and she understands and then I dunno, I just, like, feel much better if I punch her. She is really strong so it doesn't hurt her but she understands so it is okay.	5
43.	DL	Well okay yes there is something in that about turning to other people for support. It may not always be the best plan to get angry with and hit out at other people.	
44.	A	No, yeah...	
45.	DL	Is there any other way that you turn to people for support?	
46.	A	No, not really.	
47.	DL	No, not really, OK. Is there anybody that you can talk to?	
48.	A	I talk to other people but I would rather talk to friends than my mum because she would worry all day if something happened at school but obviously if it was serious I would tell the teacher.	2, 3

49.	DL	And just to give you a bit of advice – you have given some brilliant answers so far about, how, if you are feeling worried, well actually I am going to try this I am going to turn into a small plan and going to plan ahead and think about how I am going to cope, okay. So if you do share your worries with someone also share with that person the thoughts you have had of how you are going to cope because that will stop them worrying of how you are going to cope because it shows that you have a plan and what you are going to do next. Okay. So anything more? We have had a good five or six minutes chatting about this. When you are feeling anxious or worried, what helps you to cope? Are there any more ideas?	
50.	B	Yes, I go swimming	15
51.	DL	Go swimming – thats fab	
52.	D	I like swimming	15
53.	DL	Locally – at the local swimming baths?	
54.	D	Yes	15
55.	DL	That's another thing that we talked about in our sessions. Do you remember what we talked about? What other things can we do to make you feel better when you are feeling worried?	
56.	B	Isn't it like something like going shopping or something with like friends. I think we did that in our group. Like what we did to make us feel better.	4

57.	D	Yes things like going shopping, going swimming – things that take your mind of it but also things like physical exercise.	4, 15
58.	DL	Any more answers that you can think of? Okay, okay. So what we will do there then. You have given a lot of great answers and I am really impressed so thank you for those. If anything else comes up to do with question 4 let me know okay. I think that is recording ok so we will move on to question 5.	
59.	DL	<b>Question 5</b> <b>Have you used any different strategies for managing your worries since you attended the programme? So what you did for question 4, was you told me about the things you tried when you are feeling worried. How many of those things are new things? Or what strategies did you take from the programme to help you cope?</b>	
60.	A	Clenching your fists	7
61.	DL	Clenching your fists, tell me some more about that.	
62.	B	In our group we done, like...we got a sheet.	7
63.	A	We got a sheet...	7
64.	B	Yeah, we started like clenching your toes and then going up and then started with our fists, going like this and stuff (made gesture to demonstrate tensing hands and then releasing)	7
65.	DL	Yes can you remember what that was called?	
66.	DL	It was like relaxation – yes you are tensing up and then letting go	7

67.	B	Oh yes giggles	
68.	DL	Anything else?	
69.	B	Sometimes, what is, it's not like the best thing but maybe, question 4 but, sometimes maybe you do something to yourself. Harm yourself or something, if you are feeling worried?	11
70.	DL	Okay, if that something that you talked about on here? (Points to thought trackers and emotions diaries).	
71.	B	I dunno if we did that?	
72.	A	No...	
73.	DL	This is one of the things that brings me back one of the ground rules which is confidentiality - okay. So, is that something that you have done or something that has happened to you?	
74.	B	Mmm-hmm	
75.	DL	And you've felt like hurting yourself at times?	
76.	B	Yes	11
77.	DL	Okay that's okay thank you for sharing that. I might just need to share that with Mrs C (SENCo) afterwards just to make sure you stay safe okay. But we can talk about that afterwards. Remind what you said before that? (Safeguarding procedures described post-session, off tape).	
78.	A	Relaxation.	7
79.	DL	Relaxation yes okay. Anything else? Any ideas?	7
80.	A	Wait, what was the question?	

81.	DL	The question was, have you set any different strategies for managing your worries since you came to the programme?	
82.	B	I bought a punching bag thing.	15
83.	DL	A punch bag – fantastic	
84.	B	My dad like got it – or I just hit my dad in the belly when he is got those things on. Those things like flat pads that you punch, don't know what they are called.	15, 1, 5
85.	DL	When he's got those things on? Oh, the gloves?	
86.	B	Errrm... you know the things where you punch? The flat things? I don't know what they're called?	15
87.	D	Hand pads.	15
88.	B	Yeah.	15
89.	D	That boxers use...	15
90.	DL	Ah, when they are sparring?	
91.	B	Yeah.	15
92.	DL	Okay, so you might do some physical exercise with the boxing pads, with your Dad.	
93.	DL	Any other ideas?	
94.	D	I have got, like, something going back to question 4 – like, erm, if you have like a pet, I have a cat, and I always like to talk to the cat, because they don't understand (giggles) Cause it always like fusses around you and stuff. You can always talk to the cat and you think they understand because the cat is basically like your best friend.	14



95.	B	I do that, I talk to my cat.	14
96.	DL	Yes	
97.	A	Yes I like talk to my cat when I am scared at home.	14
98.	B	I like playing with my cat.	14
99.	DL	What is it about spending time with your cat? It could be your cat or it could be a different pet, what is it about that, that helps?	
100.	D	They stay still – it's just that they are not going to tell someone else.	14
101.	B	Your parents are sometimes reading newspapers or on their phone and they won't answer you. The cat will stay with you and purring and stuff.	14
102.	D	It's just feels really nice to nice to talk to someone that is furry and stuff and it doesn't understand. It's really hard to explain.	14
103.	DL	It sounds like...	
104.	A	Like comfort...	14
105.	DL	Yeah, like someone is listening, like you say, it's soft and it's nice. Is it relaxing?	
106.	B	Yep. Or like, say, talking up to like, say, one of your family members has died and you are just like talking to them and you think that they are listening to you (i.e. the cat).	14
107.	D	Also like if you talk to your cat or dog you can curl up on the sofa with them and it makes you feel cosy and, just, they love you, sort of thing and it makes you feel loved.	14, 4
108.	DL	So that is a comfy time and some relaxation time? Does anyone else ever try	

		relaxation time?	
109.	C	Yeah...	
110.	DL	What sort of things might you try?	
111.	C	Umm... like sleeping, maybe. Have a bit of a nap.	4
112.	D	I go to my god mums house – she has like a giant shed in the back garden. It's not really a shed, it's kind of like, one half of it is her husband's office and the other half is, erm, like a comfy place. I go and crash on the giant bean bag.	4, 1
113.	DL	Fantastic, that sounds like fun. What others things have you taken from the programme to help you? Taking some time for your self is a really good idea.	
114.	A	Like getting a massage done – really relaxing.	14
115.	D	My cat likes massages you when she walks along your back. Then lies down in the middle of your back and lays down for an hour and doesn't get up.	14
116.	DL	Cats are good at that – do you also spend some time with your cat?	
117.	D	Yeah, if she ever sits down! She is a bit mad.	14
118.	DL	Is there anything else that you found useful from the programme? Have a look at some of the strategies that we've laid out here on the table, to remind you. It's OK if you haven't (i.e. used these). Is there anything that you've tried.	
119.	A	The people that we were working with, because we worked with Mrs C and Mr H, 'cos I never knew, I just thought that they were, like, just a normal teacher, but now I know that I can go up to them and talk to them, because, I feel more comfortable	3

		with them and, I dunno, they're just really nice. I feel now as though I can talk to more people.	
120.	DL	Oh, fantastic. That's really good to hear, thank you A.	
121.	DL	So that is to do with the circles here – So this idea of 'my social circles', those people you have got around you – mum and dad, cats, pets, friends. We have talked about spending time with ourselves. Spending some time with your godmother and we've also spoken about who you can turn to in school.	
122.	B	And the thing where, you like clench up, like your fists and that.	7
123.	DL	Okay, fab – so is that something you have used since you came to the programme?	
124.	B	Yes – say you were in class and someone was being really stupid or, like, doing something like being an idiot, or something and you want to, like, concentrate and then you'd just be like, "oohhh", like this (demonstrates discreet hand and feet relaxations under the desk).	7
125.	DL	Now the tape recorder can't pick up things like that when you say ooooooh, so tell us what things you might be doing at that time?	
126.	B	Clenching your fists and start seeing like... or getting really angry.	7
127.	A	Like muttering under your breath that's something that I always do, but I know you shouldn't do it but it's like gosh "oh shut up", sort of thing, like - but it makes you feel better because it is coming out but they can't hear it.	10
128.	DL	Who are "they"?	
129.	A	Like the person who is being silly and who is messing around	

130.	B	...Distracting your learning	
131.	DL	So you may say what you want to say, but you say it quieter? And how does that help you?	
132.	A	Like it makes you feel that you have said it aloud and not just in your head. So, it just makes you feel better in a way.	10
133.	DL	How do you feel better? Can you put that into words?	
134.	A	Like, cos obviously like if someone is distracting you, you get quite annoyed and it builds up so if you clench your fists or mutter under your breath it goes back down again and you feel calmer.	10, 7
135.	DL	Okay, okay. Right, fab, thank you. Now, I am going to put the next question up on the board.	
136.	DL	<b>Question 6</b> <b>What strategies, if any, have you found to be the most useful?</b>  This is different to question 5, to which you have told me some really good answers. Question six says, which strategies, if any, have you found to be the most useful? Out of the strategies that you have just told me, which have been the most useful?	
137.	D	Can I look at that? (Reaches for 'controlling your feelings' resources).	
138.	DL	...and there's also the 'controlling your thoughts' strategies booklet, there, if you want to have a look at that.	
139.	DL	If you were to feel worried now or next lesson, let's say next lesson. What might be	

		the first strategy that you think “oh that’s really useful, I’ll have a go at that”?	
140.	B	Clenching your fists	7
141.	D	Yeah, I think that would be what most people would do, because it’s easy, I always clench my toes.	7
142.	DL	Do you remember what we talked about in the session. Mr H and Mrs C will have talked to you about this, things like clenching your fists, or clenching your toes, they are easy. You can keep them to yourself and not everybody can see them happening, can they? What else would you find most useful?	
143.	D	I bite my lip which is a really bad habit but I still do it anyway.	11
144.	DL	It’s a bit like clenching your fists, isn’t it? Because you can tense it up and then let go.	7
145.	DL	What else do you find useful?	
146.	C	Yeah, uhh... don’t know, probably using like a stress toy or something.	7
147.	DL	Ah you had those in the sessions didn’t you? What did you find useful about the stress toy?	
148.	C	Because you can squeeze it and like take all your stress out on it.	7
149.	DL	So using some of those pent up feelings, and taking them out on the toy instead?	

150.	C	Yeah	7
151.	DL	Okay. What else have you found useful?	
152.	A	Erm, say if your mum like tells you off and then, like, they are wrong, they tell you off for the wrong reason when they think you have done something, which you haven't. I get really annoyed that I pull my hair out or itch it out I don't know why but it is something you can hold onto.	11
153.	DL	Okay, okay – so that is one way of getting your worries out, what might be another way of doing that, without damaging your hair or hurting yourself?	
154.	A	I don't know why I do that, I don't really know , I usually do stuff that can hurt me, not like physically hurt myself	11
155.	B	Like pinching or pulling your skin or something.	11
156.	DL	Why is that important? Why is that helpful?	
157.	A	I don't know.	
158.	B	Like if you self harm or something, something like that and when you have done it you probably feel better that you have taken it out on yourself and not someone else. Next day you regret it at that point and then you feel guilty and you are going to tell your parents or something but then you think "oh they're just going to yell at me and stuff".	11
159.	D	It's not the best idea.	11

160.	DL	The other thing that I will say girls, is that I will have to share that with Mrs C, it might not go any further than Mrs C, but I need to make sure that she's aware, to make sure that you stay safe, Okay? While it might feel better in the short term, like you've said, the next day you might feel a bit guilty, you might regret it and you might actually hurt yourself as well.	
161.	A & B	Mmm...hmm	
162.	B	Yes because it might cause problems or something.	11
163.	DL	So what else have you tried instead from the programme? A, has the step by step been useful?	
164.	B	You always do that (to A).	6
165.	A	Yeah, I was thinking what to say when I have fallen out with a friend. It's really hard to explain and I do it naturally without thinking. Now it has come to a time when I like to share it with others.	6
166.	DL	Okay okay – well now it looks like A has mentioned two things. First of all, she mentioned that she almost naturally breaks something worrying down into a step-by-step plan – and it sounds likes you then talk through that plan with someone else .	
167.	A	Sort of okay – if I like i have fallen out with one friend then I go and speak to another I get advice off them and they tell me if like if it is a good idea to say that or a bad idea.	6, 2
168.	DL	Fantastic – I can tell you that Mr H told me that you are all really good at that;	

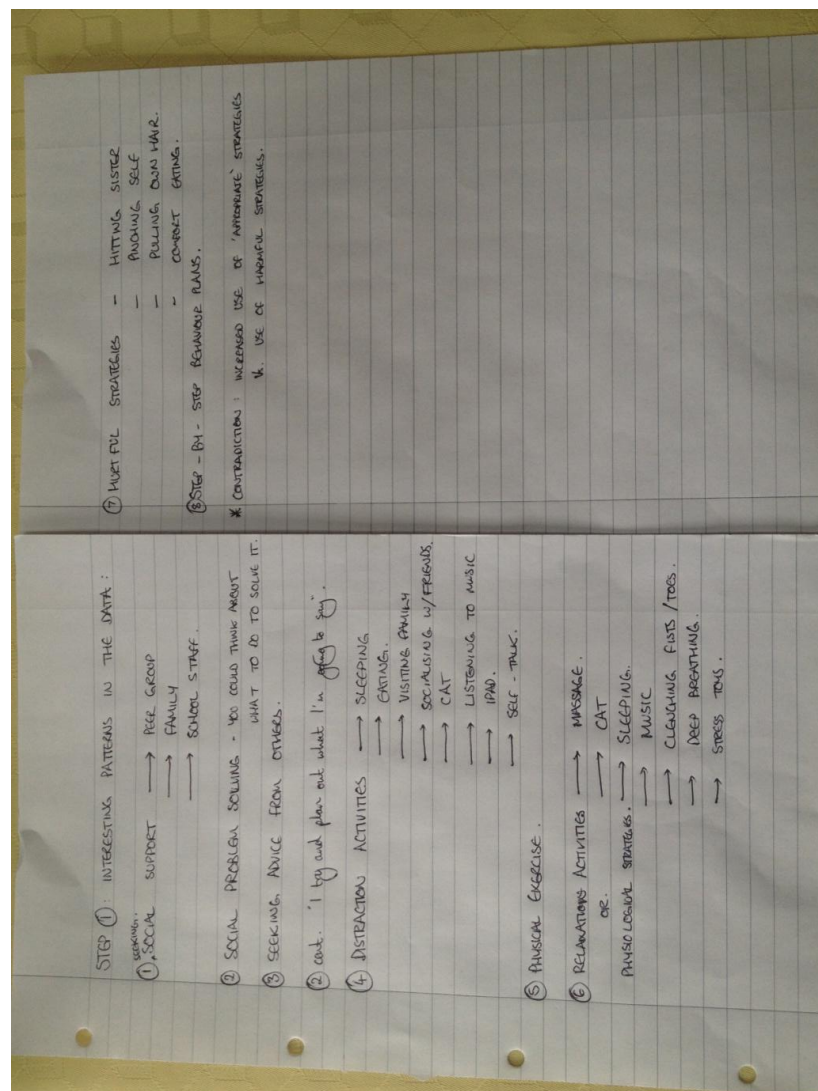
		making behaviour plans and thinking about who you could share that with. Some people have gone to find him after the session and just to say “this is what I am thinking and can I have a quick chat with you please?”. So if you are one of those people, well done fantastic.	
169.	DL	What we are going to do now is move on to slightly different questions. (NOMINAL GROUP TECHNIQUE BEGINS).	



## 7.27 Appendix 27 - Stage 1 of Thematic Analysis; Familiarisation

Notes made during familiarisation with the data set;

- Seeking social support (from various parties)
- Undertaking social problem solving, and seeking advice from others
- Undertaking a range of distraction activities
- Physical exercise
- Relaxation activities or physiological strategies
- Hurtful/harmful strategies
- Contradiction: between increased use of 'appropriate' strategies and use of potentially harmful strategies.



## 7.28 Appendix 28 - Stage 2 of Thematic Analysis; Generating Initial Codes

List of the initial codes generated;

Code Number	Code Label
1	Seeking social support from parents
2	Seeking social support from friends
3	Seeking social support from teachers
4	Making time for a nap/physically relaxing
5	Taking anxieties out on others
6	Planning possible solutions
7	Using physical relaxation strategies taught within the programme
8	Using deep breathing
9	Comfort eating
10	Using coping self-talk
11	Self-harm
12	Using music as a distraction activity
13	Using iPad/consoles as a distraction activity
14	Relaxing with pets as a distraction activity
15	Using physical exercise as a relaxation activity

## STEP ② - GENERATING INITIAL CODES

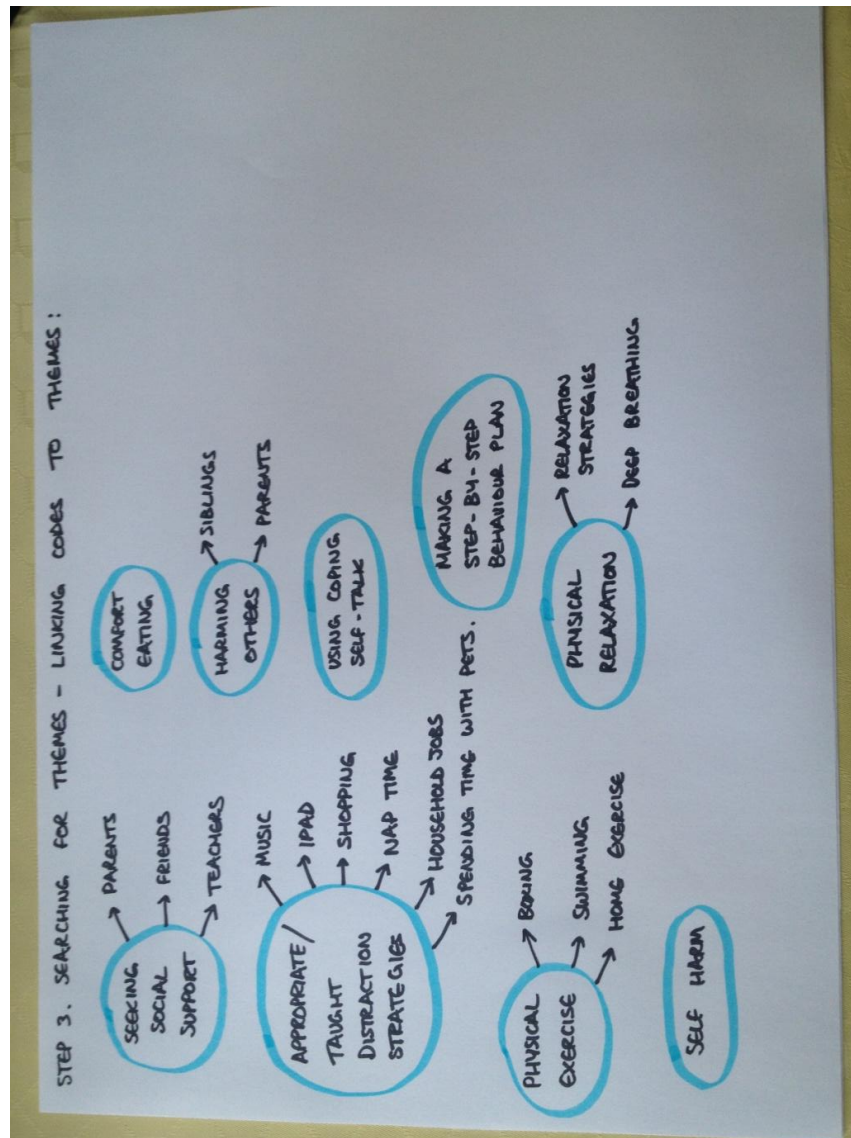
- ① SEEKING SOCIAL SUPPORT FROM PARENTS
- ② SEEKING SOCIAL SUPPORT FROM FRIENDS.
- ③ SEEKING SOCIAL SUPPORT FROM TEACHERS.
- ④ MAKING TIME FOR A NAP / PHYSICALLY RELAXING.
- ⑤ TAKING ANXIETIES OUT ON OTHERS.
- ⑥ PLANNING POSSIBLE SOLUTIONS
- ⑦ USING PHYSICAL RELAXATION STRATEGIES TAUGHT WITHIN THE PRG.
- ⑧ USING DEEP BREATHING.
- ⑨ COMFORT EATING.
- ⑩ USING COPING SELF-TALK
- ⑪ SELF-HARM
- ⑫ USING MUSIC AS A DISTRACTION ACTIVITY
- ⑬ USING IPAD / CONSOLES AS A DISTRACTION ACTIVITY
- ⑭ RELAXING WITH PETS
- ⑮ USING PHYSICAL EXERCISE.

The process of grouping coded extracts on a visual basis;



## 7.29 Appendix 29 - Stage 3 of Thematic Analysis; Searching for Themes

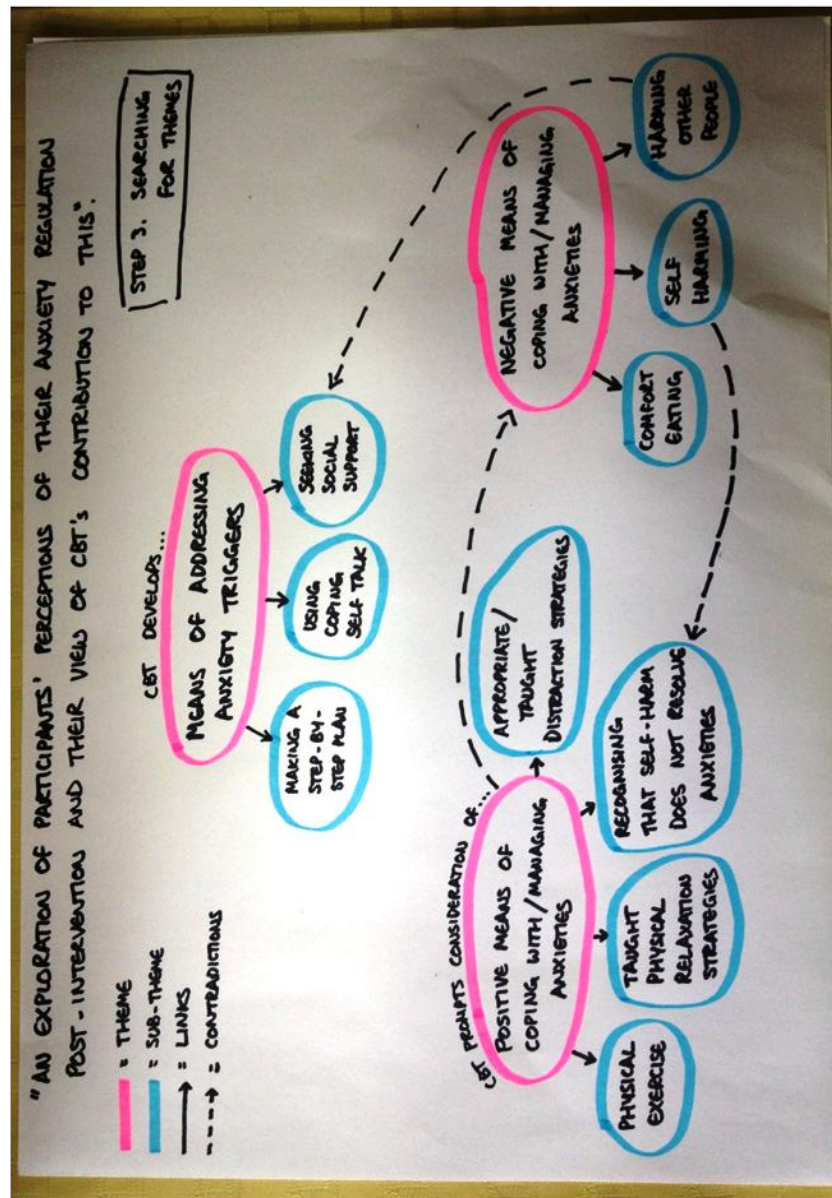
Nine initial themes were generated, with the initial codes relating to these themes displayed:





## 7.30 Appendix 30 - Stage 4 of Thematic Analysis; Reviewing Themes

Searching for overarching themes and sub-themes;



## 7.31 Appendix 31 - Question 7 from the post-intervention focus group – Nominal Group Technique data

### Question 7. “What did you like best about the programme?”

The following are themes identified with the participants:

- a) “Sharing worries and good things with the group”
- b) “Getting to know the teachers that you’re working with, so you can trust and talk to them”  
\*
- c) “I liked having one of my friends in my group, I felt more confident and had someone to back me up”
- d) “Meeting people who have the same worries as you”
- e) “Letting out your thoughts, feelings and worries – talking about the magic triangle”
- f) “Having a laugh and feeling comfortable”
- g) “Trusting your teachers” \*\*
- h) “Getting to know the teacher” \*
- i) “The thought tracker – so you could write down what you were feeling”
- j) “The changing your behaviour booklet”
- k) “Trusting your teachers to not tell anyone anything, unless it is serious” \*\*
- l) “Talking to new people in our year group”

\*Items b and h were combined to make one theme under the title “getting to know the teachers that you’re working with, so you can trust and talk to them”

\*\*Items g and k were combined to make one theme under the title “trusting your teachers”

### Voting results:

Item	Voting score
<b>A</b>	5, 5, 5 = 15
<b>B</b>	5, 4, 1, 1 = 11
<b>C</b>	4, 2 = 6
<b>D</b>	2, 3 = 5
<b>E</b>	2
<b>F</b>	0
<b>G</b>	4, 3, 3, 1 = 11
<b>H</b>	Combined with B
<b>I</b>	3
<b>J</b>	2
<b>K</b>	Combined with G
<b>L</b>	4, 1 = 5

## 7.32 Appendix 32 - Question 8 from the post-intervention focus group – Nominal Group Technique data

### Question 8. “What were the most useful parts of the programme?”

The following are themes identified with the participants:

- a) “The magic triangle and understanding the link between thoughts, feelings and behaviour”
- b) “Knowing that I could talk to other people”
- c) “Learning relaxation activities” \*
- d) “Thinking about the physical exercises that I could do”
- e) “The worksheets, such as the ‘worry thermometer’, the ‘social circles’ and the ‘worry signs”
- f) “Learning about the social circles and thinking about who can support you”
- g) “Having a laugh”
- h) “Having the sheets and booklets to take home, so we can do them in our own time”
- i) “Talking about things that people can keep to themselves”
- j) “Making a behaviour plan and rewarding yourself”
- k) “relaxation methods” \*
- l) “Learning about the thinking errors for the thought tracker and thinking about ‘dust bin labels”
- m) “Talking to teachers about your worries”
- n) “Clenching your fists”

\*Items c and k were combined to make one theme under the title “Learning relaxation activities”

### Voting results:

Item	Voting score
A	1, 1 = 2
B	0
C	5, 5, 4, 2 = 16
D	4, 1 = 5
E	2
F	2
G	4
H	5, 3, 1 = 9
I	3
J	0
K	Combined with C
L	2
M	5, 4, 3 = 12
N	3



### 7.33 Appendix 33 - Question 9 from the post-intervention focus group – Nominal Group Technique data

**Question 9. “What needs to change about the programme/what would make the programme better?”**

The following are themes identified with the participants:

- a) “If we played more games”
- b) “Having more of my friends in the group” \*
- c) “Having a mentor in school for extra support outside of the sessions”
- d) “To have someone I knew in my group” \*
- e) “Doing craft and making things, to help you remember the things we’ve talked about. We could make booklets about the key facts about worries”
- f) “Act out the magic circle examples and do drama scenes”
- g) “Have more sessions and longer sessions”
- h) “Have sessions that last for a double lesson and don’t ask students to leave the second half of a double lesson to go to the group”
- i) “Make the group bigger, with 6 people”
- j) “Have the option to do more sessions after the programme ends, with anyone from your group who may also want to carry on”
- k) “Discussing someone’s problem as a group, planning out what to do next and typing it up, so we all have a copy to learn from”
- l) “Have more one-to-one activities with a teacher”
- m) “We should be able to pick our group mates” \*
- n) “We could learn a booklet about everything we learnt and then it’s in our own words”

“I don’t want to miss certain lessons”

\*Items b, d and m were combined to make one theme under the title “Having more of my friends in the group”

#### Voting results:

Item	Voting score
<b>A</b>	5,5,1 = 11
<b>B</b>	4
<b>C</b>	0
<b>D</b>	Combined with B
<b>E</b>	4, 3, 1 = 8
<b>F</b>	2
<b>G</b>	1
<b>H</b>	3, 3, 2 = 8
<b>I</b>	2
<b>J</b>	5, 5, 3, 2 = 15
<b>K</b>	4
<b>L</b>	2, 1
<b>M</b>	Combined with B
<b>N</b>	0
<b>O</b>	0

## 7.34 Appendix 34 – Intervention fidelity checklist for intervention session one

### The Positive Thinking Programme – Fidelity checklist

**Session:** 1

**Fidelity check carried out by (initials):** NE

**Date:** 18.11.13

**Time:** 11.10am – all present

### Session Agenda:

<b>Session activity</b>	<b>Activity undertaken?</b> 1. Please mark yes/no 2. Please note time taken	<b>What went well?</b>	<b>Any suggested improvements?</b>	<b>% of activity complete</b>
Welcome to the group, introductions	Yes	<ul style="list-style-type: none"> <li>• Good introductions to staff</li> <li>• Good introductions between group members</li> <li>• Friendly, welcoming.</li> <li>• Confidentiality explained</li> <li>• Staff had planned out who would lead each section prior to session starting.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of ice breaker activities</li> <li>• Fidelity check observer wasn't introduced and purpose of presence wasn't explained</li> <li>• Outline of session timings would have been useful</li> </ul>	33%
Deciding ground rules	Yes	<ul style="list-style-type: none"> <li>• One student chosen as scribe.</li> <li>• Poster made by the group.</li> <li>• Confidentiality explained well by staff.</li> <li>• All rules explained well.</li> </ul>	<ul style="list-style-type: none"> <li>• Questioning to clarify students' understanding of rules would have been useful.</li> </ul>	75%

The magic circle – learning about the link between thoughts, feelings and behaviour	Yes	<ul style="list-style-type: none"> <li>• Good use of resources</li> <li>• Students used work examples, discussed as a group.</li> <li>• Good amount of time allowed for this activity.</li> </ul>	<ul style="list-style-type: none"> <li>• Only one adult-led example for guidance, more examples needed from staff.</li> <li>• Questions should be provided by staff to check students' understanding of thoughts, feelings and behaviours.</li> </ul>	95%
OPTIONAL – Isabella and Carlos hypothetical example.	n/a	n/a	n/a	n/a
Home task - the thought tracker	Yes	<ul style="list-style-type: none"> <li>• Home task introduced for the first time, well explained.</li> <li>• Students given chance to ask questions to check understanding.</li> <li>• Anxiety normalised by leaders.</li> <li>• Worked examples of using a thought tracker provided.</li> </ul>	<ul style="list-style-type: none"> <li>• One member of staff left the session to answer a phone call.</li> <li>• “Does everyone get that?” – closed questions used by staff, need to use open ended questions and ask students to summarise purpose of thought tracker to check understanding</li> </ul>	95%

#### Observations of the session as a whole:

N.B. observations could include activities the students engaged well with, activities the children did not favour or did not feel comfortable engaging with, activities that appeared difficult for programme leaders to deliver/explain to students, activities **that required a large amount of time to explore, activities which were relatively straight forward to discuss and which the students understood with relative ease.**

### What went well?

- Lots of opportunity for participants to share their feelings
- Good use of scaling questions by staff, for students to 'rate' the intensity with which they felt positive and negative emotions.
- Lots of praise for students' participation in activities.

### Even better if:

- The use of staff personal experiences is good as an illustrative tool, but don't over use this.
- There is a need to check students' understanding of certain concepts introduced in the session, don't assume that they understand and don't use closed questions to check understanding.

**Thank you!**

## 7.35 Appendix 35 – Intervention fidelity checklist for intervention session three

### The Positive Thinking Programme – Fidelity checklist

**Session:** 3

**Fidelity check carried out by (initials):** TL

**Date:** 02.12.13

**Time:** 9.50am – all present.

### Session Agenda:

Session activity	Activity undertaken? 1. Please mark yes/no 2. Please note time taken	What went well?	Any suggested improvements ?	% of activity complete
Introductions	Yes, 1 minute	<ul style="list-style-type: none"> <li>• Introductions carried out between group members.</li> <li>• External observer introduced to group, purpose explained.</li> <li>• Confidentiality reiterated.</li> </ul>	None specified.	80%
Recap ground rules	Yes	<ul style="list-style-type: none"> <li>• Group members asked to recall rules and could do so.</li> </ul>	None specified.	70%
Review of thought tracker	Yes	<ul style="list-style-type: none"> <li>• Each step of the tracker explained and the link between thoughts,</li> </ul>	None specified.	90%

		<p>feelings and behaviour is articulated well.</p> <ul style="list-style-type: none"> <li>• Participants given chance to add to their trackers.</li> <li>• Participants given chance to share experiences with group, as optional.</li> <li>• Children engaged, calm atmosphere.</li> </ul>		
Understanding the symptoms of worry	Yes, 15 mins	<ul style="list-style-type: none"> <li>• Video activity introduced well, purpose explained.</li> <li>• Teacher paraphrased video for children and gave examples of symptoms.</li> <li>• When students shared their feelings and worry signs during the past week, the leaders were sympathetic and discussed the strategies students had used and whether these led to improvements</li> <li>• No right or wrong answers explained by staff.</li> </ul>	<ul style="list-style-type: none"> <li>• Could be followed by a more positive activity, following a period of recalling worries.</li> </ul>	100%
Controlling your feelings strategies	Yes, 25 mins	<ul style="list-style-type: none"> <li>• Students asked for strategies which they had tried.</li> <li>• Adults modelled strategies which they had previously used.</li> <li>• Taught strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities to follow these activities up with individual students for their current concerns would be useful.</li> </ul>	90%

		<p>introduced and worked through within the group.</p> <ul style="list-style-type: none"> <li>• Emphasised that not all strategies will work for all people.</li> <li>• Lots of scaffolding provided.</li> </ul>		
Home task: The thought tracker		<ul style="list-style-type: none"> <li>• Home task shared, but little discussion about this.</li> <li>• Mini plenary given to summarise session instead.</li> <li>• Children given chance to raise any further concerns.</li> </ul>	<ul style="list-style-type: none"> <li>• Today's strategies and input could have been recapped with a final worked example.</li> </ul>	60%

Observations of the session as a whole:

**N.B. observations could include activities the students engaged well with, activities the children did not favour or did not feel comfortable engaging with, activities that appeared difficult for programme leaders to deliver/explain to students, activities that required a large amount of time to explore, activities which were relatively straight forward to discuss and which the students understood with relative ease.**

What went well?

- Leaders elaborated on the contents of session plans and gave reference to the strategies which they had used.
- Students remained engaged and cooperative throughout.
- Resources suited to the task at hand.
- Good pace to the session.
- Home tasks appeared to be complete.
- Staff displayed an empathic interaction with students.

Even better if:

- A more open questioning style could be used, as per Socratic questioning.
- If general discussions could be used at times, rather than applying each concept to each student's individual circumstances, would aid pace of session.
- Practical arrangements need improving (e.g. having all children together at the start of the sessions) – school organisation issue.
- The use of a positive emotion evoking strategy after discussion of anxieties would be useful.
- Would icebreaker games at the start of the session help to encourage participation?

**Thank you!**



## 7.36 Appendix 36 – Intervention fidelity checklist for intervention session four

### The Positive Thinking Programme – Fidelity checklist

**Session:** 4

**Fidelity check carried out by (initials):** TL

**Date:** 11.12.13

**Time:** 9.50am

### Session Agenda:

Session activity	Activity undertaken? 1. Please mark yes/no 2. Please note time taken	What went well?	Any suggested improvements?	% of activity completed
Introduction s	Not observed			
Recap ground rules	Yes	<ul style="list-style-type: none"> <li>Drew on students' knowledge by asking them to recall the ground rules.</li> </ul>	<ul style="list-style-type: none"> <li>There is a need to display the group rules posted on a consistent basis.</li> <li>There is a need to recap all rules explicitly.</li> <li>Check whether students feel any extra rules need adding.</li> </ul>	60%
Review of thought tracker	Yes	<ul style="list-style-type: none"> <li>Students provided with opportunity to add to contents of tracker in</li> </ul>	<ul style="list-style-type: none"> <li>Perhaps staff could record some thoughts too, for modelling purposes?</li> </ul>	80%

		<ul style="list-style-type: none"> <li>session.</li> <li>Students appear able to keep up to date with tracker.</li> <li>Tracker used as a inspiration for anxiety management strategies discussion with leaders.</li> <li>Students are encouraged to use the tracker to also record positive thoughts and feelings.</li> <li>Students appear keen to share experiences with group.</li> </ul>		
Thinking errors	Yes	<ul style="list-style-type: none"> <li>Well introduced</li> <li>Staff asked for examples from the group, but when none were given, staff provided these. This encouraged participants to engage.</li> <li>Staff made the thinking errors relevant to school experiences.</li> <li>Worked through hypothetical examples as a group.</li> </ul>	<ul style="list-style-type: none"> <li>A video to demonstrate thinking errors would be useful.</li> <li>Students are sometimes distracted too much by the stress/fiddle toys provided.</li> </ul>	95%
Controlling your thoughts strategies	Yes	<ul style="list-style-type: none"> <li>Good use of resources.</li> <li>Students shared those strategies they currently use, prior to</li> </ul>	<ul style="list-style-type: none"> <li>Some students may have engaged more with this activity if it had been delivered in pairs, as</li> </ul>	90%

		<p>introduction of taught input.</p> <ul style="list-style-type: none"> <li>• Leaders modelled some strategies.</li> <li>• Leaders emphasised that not all strategies will work for all people.</li> <li>• Students keen to take resources home to revisit these outside of the session.</li> </ul>	suggested.	
Home task: thought tracker with thinking errors	No		<ul style="list-style-type: none"> <li>• Thought trackers not shared this week, will need following up by researcher.</li> </ul>	n/a

Observations of the session as a whole:

**N.B. observations could include activities the students engaged well with, activities the children did not favour or did not feel comfortable engaging with, activities that appeared difficult for programme leaders to deliver/explain to students, activities that required a large amount of time to explore, activities which were relatively straight forward to discuss and which the students understood with relative ease.**

What went well?

- Strategies for managing anxious cognitions were related to in-school situations (e.g. exams).
- Leaders had a good rapport with the students.
- Students were engaged and keen to take copies of anxiety management resources home.
- Students were provided with the opportunity to discuss up to date issues during thought tracker time.
- Staff reinforced students' self-efficacy with managing worries through exploring their current use of strategies.
- Thinking errors explored well.
- Scenarios given to introduce thinking errors and cognitive strategies were realistic and the students could relate to these.
- Staff modelled strategies.

Even better if:

- Maybe staff could bring their own examples for the thought tracker, to provide further modelling.
- Further discussion needed within the group regarding the strategies which were introduced, in order to support participants with contemplating the positives and negatives of using certain strategies.
- There needs to be more time allowed for the introduction of the session and the closing remarks of the session, these activities felt rushed and the session was late starting due to students arriving late.

**Thank you!**

## 7.37 Appendix 37 - Intervention fidelity checklist for intervention session five

### The Positive Thinking Programme – Fidelity checklist

**Session:** 5

**Fidelity check carried out by (initials):** NE

**Date:** 16.12.13

**Time:** 9.50am – all present

### Session Agenda:

<b>Session activity</b>	<b>Activity undertaken?</b> 1. Please mark yes/no 2. Please note time taken	<b>What went well?</b>	<b>Any suggested improvements?</b>	<b>% activity complete</b>
Introductions	Yes	<ul style="list-style-type: none"> <li>• Introduction undertaken</li> <li>• Relaxed style.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a need to introduce the observer.</li> </ul>	80%
Recap ground rules	Yes	<ul style="list-style-type: none"> <li>• Participants asked to recall as many as they could, participants identified most.</li> </ul>	<ul style="list-style-type: none"> <li>• A full recap not provided by group leaders.</li> <li>• Clarification of why the rules are needed would also be helpful.</li> </ul>	50%

Review of thinking errors and session 4	Yes	<ul style="list-style-type: none"> <li>Nice explanation of thinking errors (Stallard, 2005).</li> <li>Good use of worked examples to illustrate these ('setting yourself up to fail' example used).</li> </ul>		90%
Changing your behaviour – making behaviour plans	Yes	<ul style="list-style-type: none"> <li>Good explanation</li> <li>Good worked scenario</li> <li>Good use of shared reading amongst the group</li> <li>Appropriate use of humour</li> <li>Good use of praise</li> </ul>	<ul style="list-style-type: none"> <li>Further questioning needed to check understanding</li> <li>Socratic questioning needed</li> <li>Need a clear idea of what rewards to use for attempting steps of behaviour plans, what would be available in this school?</li> <li>Leaders not guiding section well enough, one left the session momentarily!</li> <li>Inappropriate use of sarcasm by one leader.</li> </ul>	65%
Home task: Attempting your behaviour plan	Yes	<ul style="list-style-type: none"> <li>Home task shared.</li> <li>Discussion around who to share behaviour plans with.</li> </ul>	<ul style="list-style-type: none"> <li>Students could be encouraged to engage with collaborative problem</li> </ul>	80%

			solving outside of the sessions. <ul style="list-style-type: none"> <li>Went off task slightly.</li> </ul>	
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Observations of the session as a whole:

**N.B. observations could include activities the students engaged well with, activities the children did not favour or did not feel comfortable engaging with, activities that appeared difficult for programme leaders to deliver/explain to students, activities that required a large amount of time to explore, activities which were relatively straight forward to discuss and which the students understood with relative ease.**

What went well?

- Staff indicated that the participants were starting to understand the link between thoughts, feelings and behaviour and that the group appear more relaxed.
- Good group rapport, noticeably chatty.
- Some students indicated that they are sharing session contents with parents.
- Staff indicated that the programme had reduced some stigma in the group about worries and anxiety.

Even better if:

- Staff could be encouraged to revisit their concerns about certain students (who appear quiet and reserved) with reference to the CBT model – what might their behaviour indicate?
- Staff role needs to be empathic and understanding
- Socratic questioning needed
- Staff should reserve time for session delivery only, not be interrupted

**Thank you!**

## 7.38 Appendix 38 – Intervention fidelity checklist for intervention session six

### The Positive Thinking Programme – Fidelity checklist

**Session:** 6

**Fidelity check carried out by (initials):** NE

**Date:** 09.01.14

**Time:** 9.50am – all present

### Session Agenda:

Session activity	Activity undertaken? 1. Please mark yes/no 2. Please note time taken	What went well?	Any suggested improvements ?	% activity complete
Introductions	Yes	<ul style="list-style-type: none"> <li>Nice reflection on the group's progress at the start of the session</li> <li>Students indicated that they had enjoyed the group, they found it "nice to have somewhere to talk about it (worries)"</li> </ul>	<ul style="list-style-type: none"> <li>Not all students arrived on time, logistics of gathering students' needs considering in future.</li> </ul>	50%
Recap ground rules	Yes	<ul style="list-style-type: none"> <li>Nice recap of the contents of the previous session.</li> <li>Group rules not fully recapped again.</li> </ul>	<ul style="list-style-type: none"> <li>Recap ground rules in full.</li> </ul>	70%



Session 5 Recap and home task review: behaviour plans	Yes	<ul style="list-style-type: none"> <li>Not stated by AEP</li> </ul>	<ul style="list-style-type: none"> <li>Section shorted due to time constraints</li> <li>Remaining students arrived, quietly brought back up to speed with start of session whilst main session continued</li> </ul>	40%
Main activity: My support teams	Yes	<ul style="list-style-type: none"> <li>Good use of resources and worksheets</li> <li>Children work through sheets quietly, with an emphasis on reconvening for discussion as a group.</li> <li>Lots of coping strategies discussed for managing anxiety within worked examples, relates to content of previous sessions</li> <li>School staff shared message that students were welcome to turn to them for support outside of sessions.</li> </ul>	<ul style="list-style-type: none"> <li>None stated by AEP</li> </ul>	100%
POST MEASURES	Yes	<ul style="list-style-type: none"> <li>Well introduced, leaders used script provided.</li> </ul>	<ul style="list-style-type: none"> <li>None listed by AEP</li> </ul>	100%
End of programme key messages	Yes	<ul style="list-style-type: none"> <li>Students reminded of ground rules</li> <li>Students</li> </ul>	<ul style="list-style-type: none"> <li>School could consider a post-</li> </ul>	90%

and circulation of new thought tracker		reminded of ways of seeking in-school support after the programme. <ul style="list-style-type: none"> <li>Students provided with their resources folders that they have developed over the programme.</li> </ul>	intervention buddy system, whereby student support each other. <ul style="list-style-type: none"> <li>No final thought tracker shared.</li> </ul>	
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#### End of programme comments from students:

- “I still get nervous, but I can calm down much quicker than I used to”.
- “I feel confident talking to adults in school now (about worries)”.
- “I feel more confident sharing (my worries with others), I still get nervous but now I find a way to say it”.
- “I’ve identified the different types of worry” – comment relating to thinking errors (Stallard, 2005).

#### Observations of the session as a whole:

**N.B. observations could include activities the students engaged well with, activities the children did not favour or did not feel comfortable engaging with, activities that appeared difficult for programme leaders to deliver/explain to students, activities that required a large amount of time to explore, activities which were relatively straight forward to discuss and which the students understood with relative ease.**

#### What went well?

- Staff added that “they (students) have benefitted”
- Staff added that “they have provided each other with lots of support and encouragement”

#### Even better if:

- Associate SENCo: indicated that delivery should be delegated to other staff in future, as intervention delivery was demanding for this member of staff, with their busy diary.

**Thank you!**

### 7.39 Appendix 39 – The template used for inter-rater checks of the Thematic Analysis coding system

#### Extracts derived from the focus group transcript:

Please see the coding system attached and use this to code the extracts provided below. Please apply as many codes to each extract as you deem necessary.

No.	Extract	Code(s) given
1	"Yes, like when I have, say I've had a problem with my friends, I talk to myself. That might sound really weird but I try and plan out what I am going to say."	
2	"sleeping makes you feel relaxed... or listening to calm music"	
3	"Erm... like take a deep breath and calm down and then do something you enjoy."	
4	"Erm... like go on the iPad or something."	
5	"Like, you just get, like something really fattening then you eat it, and then after you think "oh why did I eat that?" And then like, and then you help around the house to burn it off and then it takes your mind off it."	
6	"Yes, 'cos she understands me, like, I get really angry really quickly so I take it out on my sister and she understands and then I dunno, I just, like, feel much better if I punch her. She is really strong so it doesn't hurt her but she understands so it is okay."	
7	"Yes things like going shopping, going swimming – things that take your mind of it but also things like physical exercise."	
8	"The people that we were working with, because	

	we worked with Mrs C and Mr H, 'cos I never knew, I just thought that they were, like, just a normal teacher, but now I know that I can go up to them and talk to them, because, I feel more comfortable with them and, I dunno, they're just really nice. I feel now as though I can talk to more people."	
<b>9</b>	"If I like, I have fallen out with one friend then I go and speak to another I get advice off them and they tell me if like if it is a good idea to say that (i.e. their planned response) or a bad idea."	
<b>10</b>	"Either my mum or friends (give me advice)".	
<b>11</b>	"You could think how to make it better. If you have a problem you could think what you have to do to try and solve it." ... "Like say if you had a problem with your friend you would think about what you were going to say and then go in the next day and speak to them and try and get it sorted. It's really hard to explain."	
<b>12</b>	"In our group we done, like...we got a sheet." ... "Yeah, we started like clenching your toes and then going up and then started with our fists, going like this and stuff (made gesture to demonstrate tensing hands and then releasing)."	
<b>13</b>	"Like if you talk to your cat or dog you can curl up on the sofa with them and it makes you feel cosy and, just, they love you, sort of thing and it makes you feel loved."	
<b>14</b>	"I go to my god mum's house ...I go and crash on the giant bean bag."	
<b>15</b>	"Sometimes, what is, it's not like the best thing but maybe...but, sometimes maybe you do something to yourself. Harm yourself or something, if you are feeling worried?"	

**Table of codes:**

<b>Code Number</b>	<b>Code Label</b>
<b>1</b>	Seeking social support from parents
<b>2</b>	Seeking social support from friends
<b>3</b>	Seeking social support from teachers
<b>4</b>	Making time for a nap/physically relaxing
<b>5</b>	Taking anxieties out on others
<b>6</b>	Planning possible solutions
<b>7</b>	Using physical relaxation strategies taught within the programme
<b>8</b>	Using deep breathing
<b>9</b>	Comfort eating
<b>10</b>	Using coping self-talk
<b>11</b>	Self-harm
<b>12</b>	Using music as a distraction activity
<b>13</b>	Using iPad/consoles as a distraction activity
<b>14</b>	Relaxing with pets as a distraction activity
<b>15</b>	Using physical exercise as a relaxation activity

**7.40 Appendix 40 – A table to show the effects of the between-subjects factor (condition) for Research Question One using scores on the SCAS**

**Tests of Between-Subjects Effects**

<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>	<b>Partial Eta Squared</b>	<b>Noncent. Parameter</b>	<b>Observed Power<sup>a</sup></b>
Intercept	73366.422	1	73366.422	227.623	.000	.934	227.623	1.000
Condition	30.422	1	30.422	.094	.763	.006	.094	.060
Error	5157.050	16	322.316					

a. Computed using alpha = .05

**7.41 Appendix 41 – A table to show the effects of the within-subjects factor (time) and the condition-by-time interaction (time\*condition) for Research Question One using scores on the SCAS**

**Tests of Within-Subjects Effects**

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Time	Sphericity Assumed	110.450	1	110.450	.971	.339	.057	.971	.153
	Greenhouse-Geisser	110.450	1.000	110.450	.971	.339	.057	.971	.153
	Huynh-Feldt	110.450	1.000	110.450	.971	.339	.057	.971	.153
	Lower-bound	110.450	1.000	110.450	.971	.339	.057	.971	.153

Time Condition	*Sphericity Assumed	5.339	1	5.339	.047	.831	.003	.047	.055
	Greenhouse-Geisser	5.339	1.000	5.339	.047	.831	.003	.047	.055
	Huynh-Feldt	5.339	1.000	5.339	.047	.831	.003	.047	.055
	Lower-bound	5.339	1.000	5.339	.047	.831	.003	.047	.055
Error(Time)	Sphericity Assumed	1820.800	16	113.800					
	Greenhouse-Geisser	1820.800	16.000	113.800					
	Huynh-Feldt	1820.800	16.000	113.800					
	Lower-bound	1820.800	16.000	113.800					



**7.42 Appendix 42 - A table to show the effects of the between-subjects factor (condition) for Research Question Two using scores on the SCAS-P**

**Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	29342.531	1	29342.531	44.516	.000	.761	44.516	1.000
Condition	1785.031	1	1785.031	2.708	.122	.162	2.708	.335
Error	9227.938	14	659.138					

a. Computed using alpha = .05

**7.43 Appendix 43 – A table to show the effects of the within-subjects factor (time) and the condition-by-time interaction (time\*condition) for Research Question Two using scores on the SCAS-P.**

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Time	Sphericity Assumed	69.031	1	69.031	2.597	.129	.156	2.597	.324
	Greenhouse-Geisser	69.031	1.000	69.031	2.597	.129	.156	2.597	.324
	Huynh-Feldt	69.031	1.000	69.031	2.597	.129	.156	2.597	.324
	Lower-bound	69.031	1.000	69.031	2.597	.129	.156	2.597	.324

Time Condition	*Sphericity Assumed	116.281	1	116.281	4.374	.055	.238	4.374	.495
	Greenhouse- Geisser	116.281	1.000	116.281	4.374	.055	.238	4.374	.495
	Huynh-Feldt	116.281	1.000	116.281	4.374	.055	.238	4.374	.495
	Lower-bound	116.281	1.000	116.281	4.374	.055	.238	4.374	.495
Error (Time)	Sphericity Assumed	372.188	14	26.585					
	Greenhouse- Geisser	372.188	14.000	26.585					
	Huynh-Feldt	372.188	14.000	26.585					
	Lower-bound	372.188	14.000	26.585					



