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**BRIEF COGNITIVE-BEHAVIOURAL THERAPY
FOR CHILDREN WITH
ANXIETY DISORDERS**

A thesis presented in partial fulfilment
of the requirements for the degree of
Master of Arts in Psychology
at Massey University

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ABSTRACT

The aim of the present study was to determine the efficacy of a shortened version of an efficacious cognitive-behavioural programme for anxiety in children. Four children (aged 8-11 years) diagnosed with anxiety disorders, and one or both of their parents participated in the study. Pre-treatment and post-treatment measures including structured diagnostic interviews, parent report, teacher, and self-report were administered. In addition, weekly measures of the child's trait anxiety and coping ability were obtained from the child and the parents. The programme led to marked changes in the children's functioning. All four children showed improvement on child self-report, parent report and independent clinician's ratings following treatment. Specifically, internalising and externalising behaviours, as well as their ability to cope with specific anxious situations improved in the four participants. Additionally, in most cases, parents involved in the programme showed slight improvement in their own anxiety and depressive symptoms at post-treatment. Moreover, scores for some participants had reduced to within a non-deviant range indicating clinically significant change following intervention. Most importantly, these gains were accompanied by all four children no longer receiving an anxiety diagnosis at post-treatment. Findings are discussed in terms of methodological issues (i.e., comorbidity, critical components of treatment, and duration of treatment), implications for clinical practice, and relevance for future treatment outcome research. Limitations of the research are highlighted and recommendations for future research directions are outlined. Suggestions for future research include testing the effectiveness of the programme on a large and diverse sample of children, investigating the long-term effects of treatment, and bridging the research-practice gap. Additional research is also required to find out to what extent parental involvement in the programme enhances the impact of treatment. Overall, the findings provide preliminary support for the effectiveness of a brief cognitive-behavioural programme for treating anxiety disorders in children.

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TABLE OF CONTENTS

Abstract.....	ii
Acknowledgements.....	iii
Table of Contents.....	iv
List of Tables.....	vii
List of Figures.....	viii
Chapter 1. Introduction.....	1
1.0 An Overview of the Introduction.....	1
1.1 Defining Anxiety.....	2
1.2 The Nature of Anxiety.....	3
1.3 Developmental Considerations.....	4
1.4 The Role of Gender, Culture, Urbanisation, and Socioeconomic Status.....	5
1.5 Normal versus Maladaptive Anxiety.....	7
1.6 Diagnosis and Classification.....	8
1.61 Separation Anxiety Disorder (SAD).....	9
1.62 Specific Phobia.....	9
1.63 Social Phobia.....	10
1.64 Generalised Anxiety Disorder (GAD).....	10
1.7 Prevalence.....	10
1.71 Age Differences.....	12
1.72 Gender Differences.....	13
1.73 Ethnicity and Socioeconomic Status.....	14
1.8 Comorbid Disorders.....	15
1.9 Aetiology.....	17
1.91 Cognitive-Behavioural Theory of Anxiety.....	18
1.10 Assessment.....	20
1.11 Treatment.....	23
1.111 Child Psychotherapy Research.....	23
1.112 Cognitive-Behavioural Therapy for Children.....	24
1.113 Cognitive-Behavioural Therapy for Child Anxiety.....	26
1.114 Manualised Cognitive-Behavioural Therapy for Child Anxiety.....	31

1.115 Family Based Applications of the CBT Programme.....	33
1.116 Early Intervention.....	36
1.12 Brief Therapy.....	37
1.13 The Present Study.....	38
1.131 Goals of the Present Study.....	38
Chapter 2. Method.....	40
2.0 Participants.....	40
2.1 Measures.....	42
2.11 Assessment.....	42
2.12 Structured Diagnostic Interview.....	42
2.13 Children’s Self-Report Measures.....	43
2.14 Parent Measures.....	48
2.15 Teacher Measure.....	52
2.2 Design.....	53
2.3 Procedure.....	53
2.4 Setting and Therapist.....	55
2.5 Treatment Manual.....	55
2.6 Treatment Materials.....	55
2.7 Intervention.....	56
2.8 Treatment Integrity.....	58
2.9 Ethical Considerations.....	58
Chapter 3. Results.....	60
3.0 Child Diagnoses.....	60
3.1 Child Reports.....	61
3.2 Parent and Teacher Reports.....	63
3.21 Parent Report.....	63
3.22 Teacher Report.....	64
3.3 Parent and Child Reports Across Baseline, Treatment, and Post-Treatment Sessions.....	66
3.31 Trait Anxiety.....	66
3.32 Coping Skills of the Child.....	66
3.33 Parent Self-Report.....	74

3.34 Clinical Significance.....	75
3.4 Follow-up.....	75
Chapter 4. Discussion.....	76
4.0 Summary of the Findings.....	76
4.1 Interpretation and Implications for Theory, Research, and Practice.....	78
4.2 Limitations of the Present Study.....	81
4.4 Recommendations for Future Research.....	84
4.5 Conclusion.....	87
References	89
Appendix A. Information Sheet for Parents/Guardians.....	105
Appendix B. Information Sheet for Children.....	107
Appendix C. Parent/Guardian Consent Form.....	109
Appendix D. Child Consent Form	111

LIST OF TABLES

Table 1.	Diagnoses over Time.....	60
Table 2.	Child Self-Report Scores on Outcome Measures.....	62
Table 3.	Parent and Teacher Scores on Child Outcome Measures.....	65
Table 4.	Parent Self-Report Scores on Outcome Measures.....	74

LIST OF FIGURES

Figure 1.	Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 1.....	68
Figure 2.	Changes in trait anxiety (T-scores) across assessment and treatment sessions for participant 1.....	68
Figure 3.	Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 2	69
Figure 4.	Changes in trait anxiety (T-scores) across assessment and treatment sessions for participant 2.....	69
Figure 5.	Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 3.....	70
Figure 6.	Changes in trait anxiety (T-scores) across assessment and treatment sessions for participant 3.....	70
Figure 7.	Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 4.....	71
Figure 8.	Changes in trait anxiety (T-scores) across assessment and treatment sessions for participant 4.....	71
Figure 9.	Changes in parent-reported and child-reported coping skills for participant 1.....	72
Figure 10.	Changes in parent-reported and child-reported coping skills for participant 2.....	72

Figure 11.	Changes in parent-reported and child-reported coping skills for participant 3.....	73
Figure 12.	Changes in parent-reported and child-reported coping skills for participant 4.....	73

CHAPTER 1. INTRODUCTION

1.0 AN OVERVIEW OF THE INTRODUCTION

Fears and anxieties are appropriate and adaptive responses to everyday events or situations. In relation to children, fears and anxieties are an integral part of normal maturation and help the child adjust to their world (Kendall, Chansky, et al., 1992; Ronan, 1996). Maladaptive anxiety differs from “normal” anxiety in that it is more intense, lasts longer, and leads to problems in everyday functioning (Bourne, 1990). Although anxiety is experienced by all children at various times, when it reaches a level that severely impacts on a child’s life, maladaptive anxiety can develop into a psychological disorder. Over time, untreated anxiety disorders can cause significant distress and disability to the child and his or her family.

Recent developments in the area of child therapy for anxiety disorders have demonstrated that cognitive-behavioural therapy (CBT) is effective for treating anxiety disorders in children (Barrett, Dadds, & Rapee, 1996; Kendall et al., 1997). Outcome studies have shown positive effects of CBT post-treatment, with improvement maintained at one year and three year follow-up (Kendall, 1994; Kendall et al., 1997; Kendall & Southam-Gerow, 1996). A number of family based cognitive-behavioural studies have also demonstrated effectiveness, with initial gains also maintained at follow-up periods (Barrett, Dadds, et al., 1996; Howard & Kendall, 1996; Dadds, Spence, Holland, Barrett, & Laurens, 1997). Furthermore, independent research teams have supported cognitive-behavioural therapy programmes in the United States (e.g., Kendall, 1994; Kendall et al., 1997) and in Australia (Barrett, Dadds, et al., 1996; Dadds et al., 1997).

This introductory chapter provides the relevant background to the present study. First, an overview of the nature of anxiety, developmental considerations pertinent to children, issues relating to maladaptive anxiety, and research on non-clinical fears and anxiety are outlined. Second, information on diagnosis, prevalence, and comorbidity is provided. This is followed by a detailed formulation of the theory underlying cognitive-

behavioural treatment. Third, a rationale for the study of brief cognitive-behavioural therapy for children diagnosed with anxiety disorders is outlined, and research related to this area is critically reviewed. Finally, an overview of the current study is provided.

1.1 DEFINING ANXIETY

The term *anxiety* is derived from the Latin word *anxius* meaning a condition of agitation and distress, and has been in use since the 1500s (Bourne, 1990). In current terms, anxiety can be defined as: “apprehension, uneasiness or tension related to the expectation of internal or external threat” (Kendall, Chansky, et al., 1992, p.1). Dombek and Ingram (1993) argue that anxiety is a universal emotion. Combined with a distressing affective tone, anxiety is considered to be a complex interaction of physiological, behavioural, and cognitive features (Husain & Kashani, 1992; Krauss & Krauss, 1994).

The physiological component of anxiety is characterised by problems such as stomach aches, heart palpitations, perspiration, headache, nausea, muscle tension, and vomiting (Kendall, Chansky, et al., 1992). The behavioural aspect may include restless behaviours, crying, a trembling voice, and importantly, avoidance of anxiety-producing situations (Huberty, 1997). On a cognitive/affective level, anxiety creates a subjective state of apprehension and uneasiness, and in its severe form, can cause individuals to feel that they may be dying or going crazy (Bourne, 1990).

Some believe it is important to be able to define the constructs of fear, anxiety, and phobia. Fear tends to be thought of as oriented towards an external, concrete situation or object where there is a likelihood of some related event occurring, whereas anxiety tends to be an internally focused reaction to a vague or unacknowledged danger (Bourne, 1990; Kaplan & Sadock, 1998). Huberty (1997) supports this view, commenting that fear is assumed to be related to apprehension about specific stimuli, whereas anxiety is defined as a more general apprehension, tension, or distress. Phobias, on the other hand, are considered fear-based reactions to specific environmental stimuli that involve intense, persistent, behavioural patterns of avoidance (Kendall & Ronan, 1990; Morris & Kratochwill, 1983). In contrast to anxiety, the child is able to identify

specifically the object, activity, or situation which produces the reaction (Huberty, 1997).

While there appears to be a general consensus concerning these definitions of fears and anxieties, considering these constructs as separate entities may mask their underlying similarities (Kendall & Ronan, 1990; Morris & Kratochwill, 1983). In support of this view, Costello (1982) states that there is little empirical evidence demonstrating that fear and anxiety actually differ from each other physiologically, cognitively, or behaviourally. Husain and Kashani (1992) note that both fear and anxiety have similar organising themes which include thoughts of impending danger and a state of apprehension. Although there may be differences, there is likewise a general tendency in the clinical literature to use the constructs of fear and anxiety interchangeably (Campbell, 1986; Wolman & Stricker, 1994).

1.2 THE NATURE OF ANXIETY

Anxiety appears to exist as an adaptive mechanism. It can be an appropriate coping response to a wide range of life events perceived as threatening or dangerous. Fear and anxiety can alert a person to take steps to prevent or lessen the consequences of possible threats such as the threat of pain, bodily injury, possible punishment, or separation from loved ones (Kaplan & Sadock, 1998). Thus, in its adaptive form, anxiety has survival and reward value; it can motivate individuals to take action or perform at optimum levels (e.g., when exposed to danger, performance in examinations, or competitions; Huberty, 1997).

On the other hand, fear and anxiety can be so intense or pervasive that it leads to unwanted arousal, distress, and maladjustment (Kendall & Ronan, 1990; Kendall, Chansky, et al., 1992). Abnormal fears or maladaptive anxiety can exist, when the fear or anxiety is disproportionate to the objective threat inherent in a particular situation (Herbert, 1994). In fact, anxiety can occur when individuals perceive threat when there is no real danger. Additionally, anxiety can linger on long after the threat or danger, real or perceived, has passed.

Thus, fears and anxieties are part of everyday life, helping individuals function effectively and adapt to the world in which they live. However, during a 12-month period, approximately one person in eight will have persistent, excessive anxiety sufficient to impact on their emotional, behavioural, and social functioning (National Health Committee, 1998). For such individuals with clinical levels of anxiety, the effects of anxiety disorders will, in some cases, result in considerable functional impairment (National Health Committee, 1998).

1.3 DEVELOPMENTAL CONSIDERATIONS

Normal fears and anxieties include transient fears that arise at different stages of childhood. These “developmental” fears serve an adaptive function in that they help children cope with various life stressors (Morris & Kratochwill, 1985). For example, in young children, fears of strangers and of separation from family have obvious survival value. As children mature, moderate levels of different forms of anxiety play a regulatory role in assisting them to comply with social, academic, and cultural expectations (Huzziff & Ronan, 1999).

Fear and anxiety appear to follow an identifiable path that parallels other aspects of growth and maturation (Klein, 1994). Typically, the content of fears moves from concrete, external fears to increasingly abstract or internalised anxieties (Kendall & Ronan, 1990). Bauer (1976) comments that children’s fears develop from global, imaginary, uncontrollable and powerful content to more specific, differentiated and realistic content.

Early on in infancy, fears are focused on loud noises, separation from parents, and fears of strangers, while new fears appear in early childhood (e.g., animals, the dark, monsters; Bauer, 1976). As children’s cognitive abilities develop, the content of their fears change. School age children tend to have fears related to frightening dreams, ghosts, and their health. Older children and adolescents have fears about performance, physical danger, bodily injury, and social concerns (Klein, 1994; Ronan & Deane, 1998). Campbell (1986) suggests that the content of fears change over a child’s development due to increased cognitive differentiation, the child’s growth experience, and their increased perception of reality. Although there are differences in the content of

children's fears as children mature, there are also common fears experienced by all children. Ollendick, Matson and Helsel (1985) found that eight out of the ten "most feared" objects or situations, for children aged 7 to 18, to be the same. These fears were not being able to breathe, being hit by a vehicle, bombing attacks, getting burned by fire, falling from a high place, burglar breaking into the house, earthquakes, and death.

In addition to a developmental progression in the content of fears, quantitative changes also appear to occur. In general, research indicates that the number of childhood fears decreases somewhat with increasing age (Kendall et al., 1991; Kendall & Ronan, 1990). For example, Ollendick et al. (1985) found that 16-18 year-olds reported an average of 11.6 fears compared to an average of 14.2 fears reported by 7 to 9 year-olds.

In summary, for most children, many fears and anxieties are often temporary, short-lived, and disappear spontaneously (Kendall & Ronan, 1990). For a subgroup of children, fears and anxieties do not represent transitory developmental phenomena, but rather become chronic and do not disappear with the passing of time (Merckelbach, de Jong, Muris, & van den Hout, 1996). In these instances, fears and anxieties can become maladaptive and begin to interfere significantly with a child's everyday functioning.

1.4 THE ROLE OF GENDER, CULTURE, URBANISATION, AND SOCIOECONOMIC STATUS

Despite there being a developmental sequence to children's fears and anxieties, the content of feared stimuli appears to be similar for both genders (Huzziff & Ronan, 1999). Large scale research using the Revised Fear Survey Schedule for Children (FSSC-R; Ollendick, 1978) showed that girls and boys report similar content of fears, with a 70%-90% overlap in endorsement of most feared stimuli (Ollendick, King, & Frary, 1989).

However, research does show sex differences in the prevalence and intensity of non-clinical fears and anxieties, with girls tending to report more fears than boys (Anderson, Williams, McGee, & Silva, 1987; Lapouse & Monk, 1959; Ollendick, et al., 1985). For example, Lapouse and Monk found that girls reported a larger number of fears and

worries than did boys. In a more recent study, Ollendick et al. (1985) found that girls reported an average of 16 fears while boys only reported an average of 8 excessive fears. Interestingly, Marks (1987) found that although girls reported more fears than boys, these differences were not significant until after age 10-11 years, when boys' fears may begin to dissipate faster than girls.

Biologically based sex differences may of course account for gender discrepancies. However, sociocultural factors have also been argued as having a role. Bauer (1976) and Ollendick et al. (1985) comment that sociocultural factors, such as sex-role expectations may impact on both parent and child reports of anxiety. It has been suggested that our culture allows girls to report their fears more freely, whereas boys are often encouraged to be fearless (Huzziff & Ronan, 1999). In keeping with this view, parents may be inclined to label certain behaviours as more anxiety-based in girls due to a perception that fearful behaviours are more acceptable in girls (Kendall & Ronan, 1990). While it is possible that genuine sex differences do exist, it is also possible that the obtained gender differences in anxiety are due to a "reporting bias".

Cross-cultural research into children's fears and anxieties is limited. Therefore, the evidence regarding the relationship between ethnicity and anxiety is not clear. Some studies have reported differences in fear rates between minority and majority group children (Papay & Hedl, 1978). However, other studies have reported similar fear rates (Ollendick & King, 1991). A number of studies have used the FSSC-R to examine cross-cultural issues related to the intensity, prevalence, and nature of fears (see Fonseca, Yule, & Erol, 1994, for a review). In general, findings have indicated that the most common fears in children, such as those reported in the previous section, appear to be the same across various countries and cultures (Fonseca et al., 1994).

The effects of urbanisation on the incidence and frequency of fears and anxieties are also not clear. For example, Fonesca et al. (1994) report that in Portugal, children from rural areas expressed significantly more fears than children from urban areas. On the other hand, the reverse effect was observed in an Australian study (King, Ollier, et al., 1989). Urban children in this study reported a greater number of fears than children

living in rural areas; however, the total fear scores for children from either residential area was the same. More research is required in this area.

Preliminary research indicates that socioeconomic status appears to be related to the nature of fears children report. Fonesca et al. (1994) found in English speaking countries that children from lower SES groups endorsed fears related to violence, rats, and cockroaches, while children from higher socioeconomic levels reported fears related to accidents, dangerous animals, and poisonous insects. This suggests that the nature of children's fears is related in part to their immediate social environment. In relation to the number of fears reported, children from families of lower socioeconomic status have been found to have fewer fears (Fonesca et al., 1994).

1.5 NORMAL VERSUS MALADAPTIVE ANXIETY

When do fears and anxieties become maladaptive? Establishing the boundary between normal behaviour and pathology is difficult, as anxiety in children as discussed is common and often serves an adaptive purpose (Klein, 1994). Huberty (1997) notes that the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association [APA], 1994) does not provide guidance about when normal anxiety crosses the threshold to a level of abnormality. It is up to the practitioner to determine when anxiety reaches the syndrome or disorder level. When making this judgement, Huberty (1997) comments that there are two important considerations to weigh up. First, is the content of the symptoms normal for the child's age, but at an intensity level causing dysfunction? Second, are the symptoms to be expected in a child at this developmental stage?

Labelling anxiety as maladaptive, and deciding whether to provide treatment, should involve the examination of normative, developmental data and the particular features of each child's distress or discomfort (Kendall & Ronan, 1990). Thus, in addition to normative and developmental considerations, it is important to consider individual differences when evaluating whether fears and anxieties in children are maladaptive. Factors such as temperament and situational context will likely influence how fear and anxiety is expressed (Campbell, 1986).

Anxiety disorders in children can have a chronic course and have been shown to be strongly associated with anxiety problems in adults (Gittelman, 1986; Kendall, Chansky, et al., 1992). For example, many adults with anxiety disorders reported that they suffered from anxiety disorders as children (Last, Phillips, & Statfeld, 1987). There has been a heightened interest in childhood anxiety in recent years due to a growing number of studies suggesting such links between childhood anxiety and adult anxiety disorders (Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991; Whaley, Pinto, & Sigman, 1999).

1.6 DIAGNOSIS AND CLASSIFICATION

DSM-IV (APA, 1994) is the most extensively used clinically derived classification system diagnosing childhood anxiety (Anderson, 1994; Klein, 1994). Recent revisions in DSM have seen significant changes made in relation to diagnosing anxiety disorders in children. In the current edition (APA, 1994), childhood anxiety is now diagnosed with the same guidelines as adult anxiety, with a few minor exceptions. Only Separation Anxiety Disorder (SAD) is identified as emerging during childhood or adolescence, and remains specific to the Disorders of Childhood. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R; American Psychiatric Association [APA], 1987) Avoidant Anxiety Disorder (AAD) and Overanxious Anxiety Disorder (OAD) have now been reclassified within the more general class of anxiety disorders. AAD is now referred to as Social Phobia; OAD, Generalised Anxiety Disorder (GAD).

DSM-IV (APA, 1994) lists the following anxiety disorders: panic disorder with and without agoraphobia, agoraphobia without a history of panic disorder, specific phobia, social phobia, obsessive compulsive disorder, post traumatic stress disorder, acute distress disorder, generalised anxiety disorder, anxiety disorder due to a general medical condition, substance induced anxiety disorder, anxiety disorder not otherwise specified, and separation anxiety disorder (in the Disorders of Childhood). Concerning diagnosis, special features of symptoms related to childhood are included, such as being more peer focused and having a reduced number of symptoms being required for making a diagnosis (Ronan & Deane, 1998). A brief overview of four of the more common anxiety disorders found in children are now presented.

1.61 Separation Anxiety Disorder (SAD)

The main characteristic of *separation anxiety disorder* is extreme anxiety about being away from major attachment figures, home, or other familiar surroundings (Lease & Strauss, 1993). To meet DSM-IV criteria for diagnosis, SAD requires the presence of three symptoms related to excessive worry about separation from attachment figures (e.g., school avoidance, nightmares related to separation themes, repeated physical complaints) for at least a four week period (APA, 1994). Additionally, the disorder must begin before 18 years of age, and has to have caused significant impairment or distress across important areas of functioning. The disorder is characterised by extreme distress upon actual or anticipated separation from parents or familiar surroundings, and may limit the child's activities such as school attendance or playing with friends away from home (Lease and Strauss, 1993). SAD is reported to be one of the most common anxiety disorders in preadolescent children (Kaplan & Sadock, 1998).

1.62 Specific Phobia

Formerly called *simple phobia*, the central feature of *specific phobia* is a persistent, irrational fear of and a conscious avoidance of a subject, activity, or situation (Kaplan & Sadock, 1998). The fear is excessive, and the person either avoids the phobic stimulus or tolerates it with intense anxiety. If under 18 years of age, symptoms must have persisted for 6 months or longer (APA, 1994). As opposed to adults, children are not required to recognise that the fear is excessive or unrealistic. DSM-IV differentiates between four prevalent types of specific phobia: animal type (e.g., dogs, bees), natural environment type (e.g., heights, floods, water), blood-injection type (e.g., dental treatment, injections), and situation type (elevators, enclosed places), in addition to having a separate "other" category. Common childhood phobias include fear of heights, darkness, those of the blood-injection type, small animals, and illness (Merkelbach, et al., 1996). Preliminary research shows that the natural environment type phobia (e.g., fear of heights, storms, water) is most common in children up to 10 years of age (Kaplan & Sadock, 1998).

1.63 Social Phobia

Social phobia is characterised by an overwhelming, persistent fear of social or performance situations, in which the individual is exposed to unfamiliar people or possible scrutiny by others (APA, 1994). Exposure to feared social situations can trigger anxiety, including situation based panic attacks (National Health Committee, 1998). Fears centre around the idea that the person may humiliate or embarrass him/herself in some way. Social phobia leads people to avoid certain social activities or events, or to endure them with extreme distress (Kaplan & Sadock, 1998). Children with social phobia may express their anxiety in a variety of ways depending on the situation and their usual way of responding. For example, children with social phobia may cry, freeze, throw tantrums, or shrink from social situations involving unfamiliar people.

1.64 Generalised Anxiety Disorder (GAD)

The essential feature of *generalised anxiety disorder* is excessive worry and apprehension over numerous life circumstances, occurring more days than not, for a period of at least 6 months (Huzziff & Ronan, 1999; National Health Committee, 1998). Specific worries may include areas such as family, health, job, and finances. A number of physiological symptoms are associated with this excessive anxiety and worry. These include restlessness, fatigue, poor concentration, irritability, muscle tension, and sleep problems (Kaplan & Sadock, 1998). Children presenting with GAD are often excessively concerned about punctuality and conformity, as well as wanting approval, and may engage in attention seeking behaviour (National Health Committee, 1998).

1.7 PREVALENCE

Studies investigating the prevalence of anxiety disorders in children are only just emerging in the research literature. Initial findings generally indicate that anxiety disorders in children are among the most common disorders of childhood and adolescence, even when stringent criteria (i.e., impairment significant enough to require treatment) are applied (Bernstein & Borchardt, 1991; Kashani & Orvaschel, 1988; Strauss, 1994).

Several studies have investigated the prevalence of anxiety disorders in community samples. Kashani and Orvaschel (1988) examined the 6-month prevalence rate of anxiety disorders in 150 adolescents aged 14-16 years, and found that as many as 17% met the DSM criteria for one or more anxiety disorder. However, this rate was reduced to 8.7% when the criterion of functional impairment requiring intervention was included. Kashani and Orvaschel (1990) investigated prevalence rates and symptoms of anxiety in a sample of 210 subjects across three age groups (8-, 12-, and 17- year olds) with equal numbers of males and females in each group. Findings indicated prevalence rates of 12.9% for separation anxiety, 12.4% for overanxious disorder, 3.3% for simple phobia, and 1.0% for social phobia. Girls were over-represented in every group of disorders, except for social phobia where there were equivalent rates.

In the last decade, several studies have reported prevalence rates of anxiety disorders in New Zealand. McGee et al. (1990) studied the prevalence of a range of DSM-III disorders in 943 adolescents aged 15 years, as part of the Dunedin Multidisciplinary Health and Development Study. Results showed that 5.9% met criteria for overanxious disorder, 3.6% met criteria for simple phobia, 2% met criteria for separation anxiety, and 1.1% met criteria for social phobia, with an overall prevalence rate of 10.7%. Earlier results, investigating the prevalence of DSM-III disorders in the same sample at age 11, revealed a prevalence rate of 2.9% for overanxious disorder, 3.5% for separation anxiety disorder, and 2.4% for social phobia (Anderson et al., 1987). The Christchurch Health and Development Study (Fergusson, Horwood, & Lynskey, 1993) examined prevalence rates of DSM-III-R diagnoses in a birth cohort of approximately 1,000 New Zealand children. The findings were very similar to those found by McGee et al. (1990), with an overall estimated prevalence rate of between 10.7% to 12.8%.

In summary, it appears that approximately 10% of children both overseas and in New Zealand suffer from anxiety disorders (Bernstein & Borchardt, 1991; Kashani & Orvaschel, 1990). Anderson (1994) reports that prevalence rates for individual anxiety disorders (based on DSM-III) range from 2.6% to 5.9% for overanxious disorder, 2.0% to 5.4% for separation anxiety disorder, and 2.3% to 9.0% for phobias.

1.71 Age Differences

Several studies have evaluated age differences in children diagnosed with anxiety disorders and have found consistent patterns across investigations (Anderson, 1994; Husain & Kashani, 1992). There appears to be both developmental differences in anxiety symptom intensity and diagnostic differences across age groups (Bernstein & Borchardt, 1991; Husain & Kashani, 1992). Younger children tend to be diagnosed with separation anxiety and specific phobia, whereas older children tend to be diagnosed with social phobia and generalised anxiety disorder (Ollendick & King, 1994). Strauss (1994) states that overanxious disorder (now GAD) seems to be the most prevalent subtype of anxiety disorder in adolescence, with estimates ranging from 3.6% to 7.3%, compared to 2.9% to 4.6% in childhood.

In another study, Last, Strauss, and Francis (1987) found that children with separation anxiety disorder had a mean age of 8.9 years, children with overanxious disorder had a mean age of 10.8 years, and children with social phobia had a mean age of 14.2 years. Similarly, in a study carried out by Last, Francis, Hersen, Kazdin, and Strauss (1987), results showed that children with separation anxiety disorder were usually preadolescent, whereas children with social phobia were usually adolescent.

A number of studies have shown that while overall rates of anxiety disorders remained stable over age groups, the content and types of fears and anxieties varied in clinical samples (Kashani & Orvaschel, 1990; Strauss, Lease, Last, & Francis, 1988). For example, Kashani and Orvaschel (1990) found that somatic complaints, stranger, and separation fears declined with age, while social fears, interpersonal concerns, and anxiety about personal adequacy increased with age. Additionally, anxiety disorders are likely to affect a broad range of other areas. For example, by age 12 years, anxious children appear to have more psychopathological symptoms (e.g., depression, acting out, conduct symptoms), as well as more school difficulties, poorer peer relations, and a poorer self-image compared to non-anxious children (Kashani & Orvaschel, 1990).

Very few studies have examined the course of anxiety disorder intensity over childhood and adolescence. In relation to number of symptoms of anxiety expressed, preliminary research indicates that older children are more likely to report an increased number of

symptoms than younger children (Strauss, 1990). Strauss et al. (1988) examined manifestations of overanxious disorder in two age groups of clinically referred children; those children younger than 12, and those children 12 years and older. Findings suggest that older children or adolescents demonstrate more severe symptoms, report a higher number of symptoms, higher levels of self-reported state and trait anxiety, and higher rates of self-reported depression compared to younger groups. Identifying more intense distress in older children suggests that the developmental trajectory for a number of children may be one of deterioration. However, prospective research is needed here.

1.72 Gender Differences

A number of studies report that no sex differences exist along various dimensions in children who exhibit anxiety disorders (Silverman & Nelles, 1988; Strauss & Last, 1993). Treadwell, Flannery-Schroeder, and Kendall (1995) also noted that in their clinic referred sample of 178 children, similar prevalence rates were reported for boys and girls, supporting the view that, in clinically referred anxious youth, no gender differences exist.

However, a number of other community-based investigations into gender differences in anxiety disorders have found higher prevalence rates in females. For example, Lewinsohn, Gotlib, Lewinsohn, Seeley and Allen (1998) found in their community based study of 1,079 adolescents, that girls were over-represented in the two anxiety groups (current cases and recovered cases) but not in the no-disorder group. The gender distribution for the three groups was current cases (74% female), recovered cases (65% female), and no-disorder group (48% female). In this study, diagnosed females also had significantly higher symptom scores than did male counterparts. However, no differences between males and females were observed in relation to age of onset of an anxiety disorder and duration of first anxiety episode.

Bowen, Offord, and Boyle (1990) also found gender differences in a large community study which examined the prevalence of anxiety disorders in 1869 12-16 year olds. The authors report that a female/male ratio of 4:1 for overanxious disorder (now GAD) was found in the sample. Similar gender differences were also observed in a large normal population study conducted in New Zealand. The Christchurch Health and Development

study (Fergusson et al., 1993), found that girls had 2.5 and 4 times the rate of anxiety and mood disorders, than boys in their sample.

Recent studies appear to indicate females may be more vulnerable to anxiety disorders. In their study, Lewinsohn et al. (1998) identified a range of psychosocial variables that correlated with anxiety and gender (e.g., social roles and experiences). However, statistically controlling for these factors did not alter gender differences, supporting the view that female vulnerability to anxiety is more likely to be associated with some type of genetic rather than purely environmental difference. However, the authors did not rule out the possibility that differential reporting of symptoms may have influenced the gender differences.

1.73 Ethnicity and Socioeconomic Status

A limited number of studies have examined the relationship between anxiety disorders and ethnicity. Huberty (1997) states that the rate of occurrence of anxiety disorders appears stable across socioeconomic groups and ethnicity; however, specific symptoms and causes may differ. Other research suggests that ethnic differences do exist in prevalence rates of anxiety disorders. For example, prevalence rates of agoraphobia and simple phobias for African American children have been found to be higher than Caucasians (Robins et al., 1984, cited in Treadwell et al., 1995). Similarly, Kashani and Orvaschel (1988) report that African American adolescents appear to have higher rates of anxiety disorders than Caucasian adolescents.

In contrast, Treadwell et al. (1995) found that Caucasian and African American children were equally represented in each of the anxiety disorder categories (overanxious disorder, separation anxiety disorder, and avoidant disorder) in their study using a clinical sample. Additionally, Caucasian and African American diagnosed children in the study reported similar numbers of excessive fears, 14.0 and 14.3, respectively. The authors noted that eight out of the ten most frequently reported fears on the FSSC-R in their study were the same for both ethnic groups.

The relationship between socioeconomic status (SES) and fears and anxieties has been rarely examined, and the few that have evaluated this relationship have reported

inconsistent findings (Strauss, 1993). Some investigations show equal numbers of clinically diagnosed avoidant disorder children from middle to upper-SES families as from lower-SES groups (Francis, Last, & Strauss, 1990, cited in Strauss, 1993). In contrast, Last, Hersen, Kazdin, Finkelstein and Strauss (1987) found that families of children with overanxious disorder (now GAD) were from significantly higher socioeconomic status (43% from upper or middle-upper social-status families). The authors report only 13% of families of children with SAD, and 25% of families of children with overanxious disorder + SAD, were from an upper or middle-upper socioeconomic group. Clearly, more research is required here.

In summary, it is important to investigate how culture, ethnicity, and socioeconomic levels might influence the onset, course, pattern of referral, and participation in treatment (Kazdin and Weisz, 1998). These factors may have an impact on both treatment implementation and outcome.

1.8 COMORBID DISORDERS

Anxiety disorders in children are characteristically comorbid with a range of other psychological disorders (Brady & Kendall, 1992; Kendall et al. 1991). The most common are (a) between anxiety disorders, (b) between anxiety and depression, (c) between anxiety and ADHD, and (d) between anxiety and conduct/oppositional disorders (Anderson, 1994).

Clinical studies have reported particularly high rates of comorbidity across anxiety disorders in children (Anderson, 1994; Klein, 1994). Last, Francis, et al. (1987) found that up to 50% of children and adolescents with either SAD or, more commonly yet, OAD had another concurrent anxiety disorder. Klein (1994) comments that overanxious disorder (OAD) appears to be the disorder most associated with multiple anxiety diagnoses in children. Before reviewing other relevant studies, it is important to note that a number of factors may impact on the high rates of comorbidity reported in clinic samples. For example, referral bias (i.e., more severe disorders may be more highly comorbid), the conventions applied to overlapping syndrome presentations, or the overzealous application of diagnostic criteria, may influence estimates of comorbidity (Klein, 1994).

Studies carried out in general population samples (unbiased by clinical issues) also provide important information in relation to comorbidity across anxiety disorders. Kashani and Orvaschel (1988) report that 38% of the anxiety disordered adolescents in their community sample met criteria for more than one anxiety disorder. New Zealand research indicates that comorbidity between anxiety disorders in samples drawn from the general population can be up to 36-39% (Anderson et al., 1987). In contrast, McGee et al. (1990) reported lower rates, finding that only 17% of those with an anxiety disorder had received more than one anxiety diagnosis.

Anxiety disorders are also frequently comorbid with other psychological disorders in youth (Anderson, 1994; Klein, 1994). In a review of internalising problems in children, Ollendick and King (1994) report that anxiety disorders are often comorbid with disorders such as depression, conduct disorder and ADHD. In a recent treatment outcome study, Kendall (1994) reports that comorbidity rates for participants with anxiety disorders were 15% with ADHD, 13% with oppositional defiant disorder, and 32% with depression. New Zealand community studies also found a high level of comorbidity across a range of disorders, both internalising and externalising (Anderson et al. 1987; McGee et al., 1990). Age differences in relation to comorbidity have also been observed. Younger children are more likely to present with separation anxiety and specific phobia diagnoses, sometimes comorbid with ADHD, while older children with GAD and social phobia present more often with comorbid depression or dysthymia (Ollendick & King, 1994; Huzziff & Ronan, 1999).

Comorbidity between anxiety disorders and depressive disorders are common particularly in older children and adolescents. For example, Orvaschel, Lewinsohn, and Seeley (1995) found that 64% of adolescents who received a primary diagnosis of anxiety disorder later developed a major depressive disorder. It is interesting to note that only 6.5% of those who first developed depression went on to develop an anxiety disorder. McGee et al. (1990) reports that anxiety and depression were most commonly comorbid in their New Zealand sample of 15 year-olds. Similarly, Fergusson et al. (1993) found that there was a significant tendency for children who met criteria for anxiety disorders to also have increased rates of mood disorders (odds ratio = 4.6-4.9). Interestingly, Francis (1990) notes that compared with children only suffering from an anxiety disorder, children with mixed anxiety and depressive disorders report higher

levels of distress on self-report instruments (see also Ronan, Kendall, & Rowe, 1994; Ronan & Kendall, 1997).

In summary, when carrying out assessment and treatment for anxiety, practitioners need to be alert to the other disorders that may coexist with a primary anxiety diagnosis. It is important to note that the presence of other disorders can affect treatment responsiveness (Kazdin & Weisz, 1998). The research literature suggests that treating the primary anxiety disorder can reduce symptoms among the concurrent disorders; however, failure to treat both or all presenting conditions may result in poorer treatment outcomes (Brown, Antony, & Barlow, 1995). Additionally, the National Health Committee (1998) comments that comorbid disorders are linked to poorer recovery rates, poorer treatment outcomes, and greater psychosocial impairment in individuals with anxiety disorders. Thus, researchers and clinicians need to consider the implications of comorbidity issues when assessing for and treating anxiety in youth. For example, more comprehensive treatment strategies may be required for children and adolescents presenting with concurrent disorders.

1.9 AETIOLOGY

A number of explanatory models have been put forward, concerning the aetiology of anxiety. Biological factors such as high arousal levels and different neurotransmitter systems, premorbid personality factors, and stressful life events have been proposed as causes of anxiety (Emmelkamp, Bouman, & Scholing, 1992; Taylor & Arnow, 1988). Psychodynamic theories view anxiety as a signal of unconscious fantasies of imagined dangerous situations (Taylor & Arnow, 1988) or a response to separation (especially from the mother; Husain & Kashani, 1992). Learning theories originate from Pavlov's classical conditioning model whereby early trauma initiates stimulus generalisation, such that one fear becomes the source of other fears (Husain & Kashani, 1992). In the last couple of decades, learning theories have gone through a number of revisions and reformulations. Recent learning theories include the preparedness account, and neoconditioning and neoassociative perspectives (Menzies & Clarke, 1995; Merckelbach, et al., 1996). Cognitive models assume that expectancies of danger

mediate anxiety responses, and that these expectancies are learned, through respondent conditioning, observational learning, and information (Taylor & Arnow, 1988).

More recently, theorists have emphasised an interactional perspective in which biological, cognitive, and behavioural factors are considered to play an important role (Emmelkamp & Scholing, 1994). To date, no single theory is able to provide a comprehensive explanation for the origins of anxiety. It is not possible to detail the multiple theories related to the aetiology of anxiety in this document. Given the focus of the current study, the next section provides an overview of the cognitive-behavioural theory of anxiety.

1.91 Cognitive-Behavioural Theory of Anxiety

Cognitive-behavioural theory is derived from social learning theory (Bandura, 1986). In particular, Bandura's (1986) work on observational learning drew attention to the importance of cognitive factors in behaviour therapy. Social learning theory provides a foundation for cognitive-behavioural theory, emphasising that learning occurs within a social context. Herbert (1994) supports this view, commenting that individuals do not simply respond to stimuli, they interpret stimuli by interacting with and learning from social systems, including the people with whom they associate.

In terms of social learning theory's usefulness in conceptualising anxiety, Bandura (1986) suggests that aversive experiences create beliefs centred around an inability to control outcomes. Situations that remind the person of earlier aversive experiences produce arousal and a sense of threat. The person then engages in coping mechanisms such as avoidance behaviour to reduce anxiety. Once protective strategies are developed, they can then become activated under conditions of perceived rather than actual threats.

While the foundation for cognitive-behavioural theory is derived from a social learning model, the theory also integrates several other perspectives; most notably, behaviour or learning theory (i.e., classical and operant models), and cognitive theory, involving cognitive structures, content, and processes (Kendall, Marrs, & Chu, 1998). Cognitive-

behavioural theorists suggest that individuals view and make sense of their world through their cognitive structures or schema, and this “template” can influence what is perceived, how information is processed, and how information is understood (Kendall, Chansky, et al., 1992). Ronan and Deane (1998) state that within a cognitive-behavioural model of anxiety, this template is likely to be organised around a pervasive sense of threat and uncertainty. When cognitive processes become focused on a sense of threat or danger, maladaptive fear and anxiety are likely to develop.

Particularly in recent times, theorists have stressed cognitive representations and cognitive schemata as being critical determinants of anxiety disorders (Emmelkamp & Scholing, 1994; Taylor & Arnou, 1988). A cognitive-behavioural model of anxiety asserts that children’s responses to their environment are cognitively mediated, and that cognitive dysfunctions are present in children with anxiety problems (Kendall & Gosch, 1994). Ronen (1998) also supports this view, stating that there is evidence that cognitive deficits characterise childhood disorders, therefore cognitive components need to be integrated into therapy with children. Differentiating between *distorted* and *deficient* cognitive processing, Kendall, Chansky, et al. (1992) suggest that anxious children tend not to be deficient in information processing, but rather show a distorted information processing style.

Children who frequently engage in distorted cognitive processing may view themselves hypercritically and not realise their talents and abilities. Such erroneous processing about behavioural events can influence children’s emotional states, and this in turn can create unrealistic expectations or inaccurate perceptions about themselves or their environment (Kendall et al. 1992; Kendall & Gosch, 1994). For example, an anxious child who has repeatedly avoided social situations out of fear that they will embarrass themselves has built a cognitive structure that will continue to influence their perception of similar situations in the future. The child may believe that his or her avoidance has “paid off” because anxiety is reduced. If so, this may then create increasingly negative expectancies that social situations are potentially harmful and perhaps even catastrophic (Kendall, Chansky, et al., 1992).

Cognitive-behavioural theory views anxiety as a multi-dimensional construct, and assumes that thoughts, feelings, and behaviour are causally connected (Kendall & Gosch, 1994). In relation to children, a cognitive-behavioural perspective considers the environment to be strongly influencing the thoughts, behaviour, and emotions of the child, while the child at the same time is strongly influencing their environment. Thus, interventions using a cognitive-behavioural model focus on both children's internal processing of the world, as well as the external environment.

In summary, Kendall and Ronan (1990) state that cognitive-behavioural theory views children's cognitions and behaviours as functionally related to each child's affective states, and his or her functioning in the social environment. The cognitive-behavioural model emphasises integrating developmental and emotional elements into therapy, while incorporating treatment within the child's natural environment (Ronen, 1998). This may involve working with family, school, or peer-group social systems. Family, school, or other contextual influences such as the child's relationship with his or her peers, needs to be considered in both the assessment and treatment of anxiety.

1.10 ASSESSMENT

It is recommended that a scientist-practitioner approach be taken when carrying out assessment and treatment (Johnson & Sheeber, 1999; Kendall, Flannery-Schroeder, & Ford, 1999). The scientist-practitioner model advocates taking a scientific hypothesis-testing approach to clinical work that is flexibly applied to meet the needs of each individual case. In relation to children, the scientist-practitioner model focuses on generating clinical hypotheses that direct the assessment process. These hypotheses lead to a reliable, valid, and clinically relevant presentation of the child's current functioning, with implications for treatment (Johnson & Sheeber, 1999). Using this model involves the clinician developing initial hypotheses about the child's difficulties that are then supported, revised, expanded, or rejected depending on the information that is collected throughout the assessment process (Johnson & Sheeber, 1999).

Drawing from Lang's (1968) model, three major response channels are influenced by excessive fear and anxiety: behavioural, physiological, and cognitive/affective components, and assessment needs to focus on all three (Kendall et al., 1991; Ronan,

1996). Ronan points out that children will present with their own particular patterns of anxiety, and detailed assessment of these individual patterns can provide an important guide for treatment recommendations. For example, the usual behavioural response to anxiety is avoidance. Identifying the child's own characteristic mode of escape/avoidance can help specify the type of treatment strategies that will be most useful in treating the anxiety problem (e.g., participant or coping modelling, operant procedures; Ronan, 1996).

A functional assessment framework is recommended (Ronan & Deane, 1998). Ronan and Deane advise that functional assessment should focus on the antecedents and consequences of the child's responses across each of the response domains outlined previously. The purpose of this is to identify those elements or features that bring about and maintain anxiety. This information needs to be integrated with environmental conditioning factors (classical and operant) and internal features (e.g., self-talk, skill deficits, physiological arousal), within developmental, family, academic, and social contexts (Ronan, 1996; Ronan & Deane, 1998). In the cases where anxiety is maladaptive, developmentally sensitive assessment, and knowledge of relevant scientific literature will assist parents and the child enter treatment with a potentially more optimistic view regarding the potential benefits of treatment (Ronan, 1996).

Generally, within a functional framework, assessment should take a multi-method approach incorporating information from clinical interviews, child self-report, parent and teacher ratings, behavioural observations, family and medical history, and in some cases, physiological indices (Kendall et al., 1991; Kendall & Gosch, 1994). Along with the consideration of extensive developmental changes that happen during childhood and adolescence (e.g., physical, cognitive, emotional, biological and verbal and comprehension abilities), assessors need to be mindful of the issue of social-familial context (Kendall & Gosch, 1994).

As mentioned, cognitive-behavioural approach to assessment involves generating hypotheses that clearly describe current behaviour, thought patterns, affective insight, and environmental circumstances, which are thought to be maintaining the anxious child's current difficulties (Kendall et al., 1998). Initial decisions made based on assessment are then further assessed in treatment and modifications made as necessary

(Kirk, 1989). Additionally, Kendall et al. (1998) point out that empirical evaluation of the treatment targets is important. Empirical evaluation entails careful assessment of behaviour and cognition before, during, and after treatment, and if possible at a later follow-up date. Follow-up evaluations are important as they may detect relapse or show continued improvement associated with treatment (Kendall, et al., 1999).

Since CBT is to be used in the treatment of childhood anxiety (Kendall et al., 1997), a detailed assessment of both behavioural and cognitive features of the specific anxiety problem is necessary. In the majority of anxiety assessment protocols to date, behavioural procedures have been adopted more frequently than cognitive procedures (Ronen, 1998). However, Kendall and Ronan (1990) argue that failure to include cognitive measures in the assessment battery will greatly reduce the clinician's ability to intervene and monitor appropriately.

One of the potential challenges facing clinicians carrying out assessment in this area is that some of the data collected may be discrepant. When evaluating emotional or behavioural problems in children, and using multiple informants, different conclusions may be drawn. For example, teacher and parent reports of children's emotional functioning and internal mood states, can at times be quite conflicting. There is no agreed benchmark to serve as a criterion when evaluating data from various informants. Huberty (1997) suggests when information is conflicting, conclusions regarding assessment and diagnosis, should be based on the overall pattern of information provided. Highly conflicting information from one source may need to be given secondary consideration, particularly if it is inconsistent with most other information being reported. When evaluating data from different sources, Kazdin & Weisz (1998) state that different reports may each have their own validity being based on different perspectives (e.g., home versus school behaviour).

An efficient approach to the assessment of anxiety disorders in children involves the use of multiple-gating procedures (Kendall, Cantwell, & Kazdin, 1989). Multiple-gating refers to the use of multiple methods of assessment across multiple time periods. For example, this may involve a two-stage process whereby children are first screened using brief symptom questionnaires. This is followed by a more rigorous, detailed assessment with those children initially identified (Daleiden, Vasey, & Brown, 1999). Brief

symptom questionnaires are currently the most utilised assessment tool for the first stage of multiple-gating while the second stage usually includes the use of a structured diagnostic interview (Kendall et al., 1989).

In summary, informed treatment decisions, and implementation of useful and effective strategies, need to be based on reliable, valid information, gained from initial and ongoing assessments. Factors such as who is making the referral, the capability or willingness of the child to report symptoms, and the comorbidity of anxiety with other psychological problems, also need to be considered. Only through developing and testing clinical hypotheses, and collecting assessment data from a range of sources across settings, can the clinician get a comprehensive understanding of the child's presenting difficulties (and strengths). This comprehensive assessment information can then guide the practitioner in deciding which intervention strategies may be most effective in assisting the child. The current study used both comprehensive initial and final assessment combined with weekly session ratings to monitor progress of treatment.

1.11 TREATMENT

1.111 Child Psychotherapy Research

Child therapy has become the focus of extensive research in the last two decades (Kazdin, 1994; Kazdin & Weisz, 1998). Kazdin concludes, based on over 300 studies, that psychotherapy for children appears to be better than no treatment, and that these effects closely resemble those obtained from outcome research with adults. Kazdin also reports that different treatment techniques bring about similar outcomes, though behavioural based interventions may be slightly more effective than non-behavioural treatments.

At least four broad-based child therapy meta-analyses comprising of over 300 individual treatment outcome studies have been reported (Weisz & Weersing, 1999). For example, Kazdin, Bass, Ayers, and Rodgers (1990) reviewed outcome studies published between 1970 and 1988, which included children aged 4-18, and found the

mean effect size (ES) was 0.88. This indicated that the average treated child was better off after treatment than 81% of the no-treatment control group. More recently, Weisz, Weiss, Han, Granger, and Morton (1995) surveyed studies published between 1967 and 1993, which included children aged 2 to 18. The mean ES was 0.71, suggesting that the average treated child was functioning better after treatment than 76% of control group children.

Overall, effects across the four meta-analyses ranged from 0.71 to 0.88. Apart from these overall effects, the meta-analyses have also generated estimates of the impact of a number of other factors of interest. For example, Weisz et al. (1995) found behavioural treatments generated larger effects than non-behavioural treatments, and found no differences in ES values in treatment outcome across internalising and externalising disorders. It is interesting to note that in the Weisz et al. (1995) study, the mean ES was larger for adolescents than children. Additionally, the mean ES for samples of predominantly or exclusively adolescent girls in this study was twice as large as the mean ES for adolescent boys, and for girls and boys combined (Weisz & Weersing, 1999).

1.112 Cognitive-Behavioural Therapy for Children

Summary of Effectiveness

Meta-analyses across multiple outcome studies specifically involving cognitive-behavioural therapy, have also showed positive effects (Kazdin & Weisz, 1998). For example, Durlak, Fuhrman, and Lampman (1991) reviewed sixty-four treatment outcome studies using cognitive-behavioural therapy and found that there was a mean ES of 0.92 for older children aged 11 to 13 years. However, Durlak and colleagues reported that there was only a mean ES of 0.55 for children aged 7 to 11, and 0.57 for children aged 5 to 7. Older children may thus receive more benefit from cognitive-behavioural treatment than younger children do.

Major Features

Cognitive-behavioural therapy (CBT) employs treatment strategies that focus on cognitive and behavioural targets (Kendall, et al., 1998). Most importantly, examining the cognitive interpretation of children's experiences is considered a critical aspect of CBT. For example, Kazdin (1994) states that CBT focuses on the conceptualisation of dysfunction based on cognitive processes such as attributions, schemas, beliefs, and expectations, and that changes in these processes are central for therapeutic change.

The majority of cognitive-behavioural treatments for children implement a variety of operant and classical procedures. These include incorporating behavioural components such as modelling, and role-play. These components aim to demonstrate the connection between mood, thoughts, and behaviour, and allow the child to practice new skills (Kendall, et al., 1998). Additionally, cognitive components such as problem solving (aimed at deficits) and cognitive restructuring (aimed at distortions) are used.

Cognitive-behavioural therapy uses other techniques that combine both cognitive and behavioural concepts, and can include relaxation training and affective education. In particular, assisting the child to interpret emotional cues of others as well as their own emotional responses, is an important component of CBT. Cognitive-behavioural therapists typically help children to identify internal cues, differentiate between thoughts and emotions, and learn how emotions influence behaviour. Ronen (1998) points out that emotional experiences, and the interpersonal frame of reference within which these experiences are created are critical for understanding the way that children cognitively appraise, evaluate, and choose to handle situations.

Furthermore, cognitive-behavioural therapy with children and families emphasise both individual differences (i.e., the unique way that children think, feel, behave, in relation to their internal and external experiences), and the influence of the social environment on behaviour (Ronen, 1998). In particular, the role of family and peers is important to children's functioning and overall adjustment. The cognitive-behavioural view takes into account these contexts, and it is recommended that CBT incorporate social and interpersonal issues explicitly into their programmes (Kendall, Chansky, et al., 1992).

Interventions are usually time-limited with booster and maintenance sessions if required (Kendall et al., 1998). There is a joint focus in treatment on assisting the child to make short term observable changes, while emphasising long term cognitive, emotional and behavioural change. The role of the therapist is one of diagnostician, educator, and consultant to the client (Kendall & Gosch, 1994). The child is viewed as a partner in the therapy decision making process. Ronen (1998) comments that a CBT approach encourages the child and family to learn about the strategies required for behaviour change, understand their rationale, and take responsibility for their practice and application.

In summary, problems of childhood are currently receiving greater research attention than previously, and outcome research is at a crucial, challenging, and promising stage of development (Kazdin, 1994). Randomised clinical trials of psychotherapy for children are limited in number compared to the research that has been carried out with adults, although CBT is one of the more meticulously and frequently evaluated child interventions (Kendall et al., 1998). A number of well-controlled treatment outcome studies have contributed to demonstrating the efficacy of cognitive-behavioural therapy for children (Kendall et al., 1998). The present thesis now provides a more specific review of cognitive-behavioural treatment for anxiety in children.

1.113 Cognitive Behavioural Therapy for Child Anxiety

Background and Major Aims

Prior to the last 10 years, only a small number of studies have compared alternative anxiety treatments for children (Kazdin, 1994). For example, a study conducted by Miller, Barrett, Hampe, & Noble (1972) indicated that psychotherapy and systematic desensitisation were better at reducing symptoms than a waitlist control, with younger children (ages 6-10) showing greater improvement than older children (ages > 11). Research on school refusal compared behaviour modification, in-patient hospitalisation, and home tutoring plus psychotherapy (Blagg and Yule, 1984). Results showed that behavioural treatment had a clearly superior outcome compared to the other two groups in the study.

In the past 10 years, some of the most promising and best evaluated anxiety interventions are based on a cognitive-behavioural model (Barrett, Dadds, et al., 1996; Kendall, 1994). The overall aim of the cognitive-behavioural approach is (a) management of anxiety (b) reduction of personal distress, and (c) increasing mastery and coping skills (Kendall, Kane, Howard, & Siqueland, 1990; Kendall, Chansky, et al., 1992).

In addition, cognitive-behavioural treatment aims to change distorted cognitions such as sense of threat, negative evaluations and unrealistic expectations (Kendall & Gosch, 1994). Anxious children characteristically report a proportionately high rate of negative thinking (Ronan et al., 1994; Ronan & Kendall, 1997). For example, research shows that anxious children will report increased levels of negative expectations and negative self-talk compared to controls (Kendall & Panichelli-Mindell, 1995; Ronan et al., 1994). Kendall, Chansky, et al. (1992) suggest that correcting distorted cognitions requires a joint focus on reducing excessive negative thinking, and increasing positive thinking. In recent years, modifying cognitions have become a primary focus of treatment, and a proposed catalyst for change in children with anxiety related disorders (Kendall et al., 1998).

Furthermore, cognitive-behavioural therapy with anxious children aims to focus on the relationships between three response domains of anxiety: physiological arousal, behavioural avoidance, and negative cognitive appraisal (Kendall et al., 1991). This is based on the observation that excessive anxiety in children commonly manifests itself in physiological (e.g., rapid heartbeat, excessive perspiration), cognitive (e.g., maladaptive thoughts, unrealistic concerns), and behavioural (e.g., avoidance behaviour, tantrums, angry outbursts) symptoms. These symptoms can severely interfere with the child's relationships with family, peers, or broader social networks (Kendall, Chansky, et al., 1992). All three manifestations of anxiety are specifically addressed in CBT, with a focus on how these domains interrelate to each other and influence the process of therapeutic change in the child.

Major Components

A variety of components are included in most cognitive-behavioural treatments such as relaxation, modelling, exposure, correction of maladaptive self-talk through cognitive restructuring, problem solving, and contingency reinforcement (Kendall, Chansky, et al., 1992; Kendall & Gosch, 1994). A cognitive-behavioural treatment model provides opportunities for anxious children to learn and practice these strategies in increasingly stressful situations (Ronan & Deane, 1998). An overview of the major components of CBT for child anxiety is now presented.

Two commonly taught relaxation techniques for child anxiety are progressive muscle relaxation and cue controlled relaxation. Progressive muscle relaxation involves the tensing and relaxing of specific muscle groups in the body, and cue controlled relaxation involves the repeated association of a relaxed state with a cue word such as “calm” or “relax” (Kendall, Chansky, et al., 1992). Relaxation training addresses the problem of heightened physiological arousal, and increased muscle tension, that is often associated with unwanted anxiety. Relaxation training is effective in assisting children to manage physiological responses to distressing situations (Kendall & Gosch, 1994).

Another useful strategy employed in treatments for childhood anxiety is the technique of observational learning or modelling. Kendall, Chansky, et al. (1992) point out that there are a number of different types of modelling that have been utilised which include symbolic, live, and participant modelling. Symbolic modelling involves the child watching a video recording of someone approaching the feared situation, while live modelling involves the child watching a “live” model reacting to a fearful experience (Kendall, Chansky, et al., 1992). Participant modelling, on the other hand, involves the child first observing and then “copying” by approaching the feared situation or object.

The modelling construct originated in the observational learning paradigm (Bandura, 1986), and is based on the premise that behaviour can be acquired, facilitated, reduced, or eliminated by observing others' behaviour. In relation to reducing fear and anxiety, modelling can demonstrate non-fearful behaviour in anxiety-provoking situations. In particular, the efficacy of modelling strategies for the treatment of phobias in children

has been clearly documented (Ollendick & Francis, 1988). Modelling is often combined with role-play in the current treatment approach.

Through modelling, role-play, and perhaps most importantly, in vivo exposure, children practice in therapy how to cope with anxious situations. Exposure involves the child facing the feared or anxious situations or objects that they have been actively avoiding. Exposure can take the form of systematic desensitisation, imaginal, and in vivo exposure (Dadds, Barrett, & Cobham, 1998). Investigators have found that continued exposure to an anxiety-provoking stimulus will bring about a reduction in anxious responding in the child (Kendall & Gosch, 1994). Why exposure is so effective in reducing anxiety is unclear. It has been proposed that exposure may result in the extinction of conditioned responses and habituation of physiological arousal, while at the same time, bringing about an increase self-efficacy beliefs, and a decrease in negative self-talk (Kendall & Gosch, 1994). Exposure to, or contact with situations or objects that have elicited anxious experiences, is an effective and major component of CBT for childhood anxiety (Kazdin & Weisz, 1998; Kendall & Gosch, 1994).

Cognitive restructuring is a technique used to modify faulty or distorted anxiety-based thinking. The process involves firstly being able to identify and modify maladaptive thinking, then being able to develop a more adaptive way to view experiences, based on coping rather than fear. Negative thinking and expectations are replaced by more realistic, adaptive thoughts. In cognitive restructuring, the therapist gently challenges the child's unrealistic reasoning and negative interpretation of situations through questioning. Questions might be, "What do you think might happen? What is the likelihood of this occurring?" and "How many times has this happened before?" Cognitive restructuring is an important component in the treatment for childhood anxiety (Kendall, 1994; Kendall et al., 1997).

Anxious children are encouraged not to avoid emotionally arousing and fearful situations, but rather to take the perspective of viewing these situations as problems that need to be managed. Problem solving skills are specifically taught in CBT, and treatment opportunities are provided for the children to practise, using a problem solving approach to dealing with anxious situations. Problem solving incorporates several steps that include, identifying the problem, generating possible solutions,

selecting the most preferred option, and carrying out the selected option (Kendall, & Panichelli-Mindel, 1995). An important part of the problem solving process is for the child to evaluate how successfully they coped with specific anxiety-provoking situations. Practise and success with problem solving during therapy can give children a sense of competence. It can also help them to achieve an understanding of how to approach and manage future problems (Kendall, Chansky, et al., 1992). Problem solving has been found to increase post-treatment gains of in vivo exposure in individuals with agoraphobia (Kleiner, Marshall, and Spevack, 1987) and is an integral part of therapy for anxiety disorders in children (Kendall et al., 1997).

Additionally, contingency reinforcement is an important component in cognitive-behavioural treatment programmes (Kendall & Gosch, 1994). In relation to fears and anxieties, contingency reinforcement involves the child being reinforced for approaching feared stimuli, while rewards for fearful behaviours are removed (i.e. fearful behaviours are put on an extinction schedule; Dadds, et al., 1998). Contingency management strategies are based on the principles that environmental responses to specific behaviours will affect the frequency of their occurrence. Therefore, behaviours followed by positive reinforcement are more likely to re-occur. Operant based procedures such as contingency reinforcement have been particularly successful in the treatment of anxiety problems such as social and specific phobias as well as school refusal (King & Ollendick, 1989; Ollendick & Francis, 1988). Specifically, contingency reinforcement appears to be a particularly useful method of decreasing avoidant behaviours and increasing the occurrence of coping behaviour in children (Kendall & Gosch, 1994).

In summary, childhood anxiety disorders have recently gained increased attention from the research community due to promising findings involving cognitive-behavioural therapy. Recent investigations most of which are examined in more detail in the next section, have shown that anxiety disorders in children can be effectively treated in the majority of cases (see Dadds et al., 1998, for a review). Kendall et al. (1998) point out that cognitive-behavioural therapy is not designed to provide a cure for childhood disorders such as anxiety. However, it does promote the essential strategies or components needed for the child to manage stress and anxious arousal effectively. The

cognitive-behavioural intervention that integrates the procedures outlined in this section into a manualised programme is now presented along with relevant research.

1.114 Manualised Cognitive-Behavioural Therapy for Child Anxiety

A fundamental feature of current psychotherapy outcome research is the inclusion of treatment manuals (Goldfried & Wolfe, 1998). Depending on the type of intervention that is being tested, treatment manuals may contain broad descriptions of principles and phases of treatment, or may consist of detailed session by session outlines of the therapy (Chambless & Hollen, 1998).

Manualised treatments have a number of important advantages. The use of a treatment manual enables a more accurate replication of treatment outcome studies (Kendall et al., 1999). This is of course important when determining the effectiveness of therapy (Goldfried & Wolfe, 1998). Treatment manuals also reduce potential confounds such as differences in client/therapist contact, varying amounts of training time before treatment, and time between treatment sessions (Dobson & Shaw, 1988). Furthermore, treatment manuals allow integrity checks to be conducted which demonstrate that the treatment described is actually the treatment provided (Kendall et al., 1999).

In terms of treatment for child anxiety, Kendall et al. (1990) have developed a manualised 16-20 session cognitive-behavioural treatment (see also Kendall, Chansky, et al., 1992). The overall goals of the manualised programme include a) recognising anxious feelings and somatic responses to anxiety, b) identifying cognitions in anxiety-provoking situations, c) developing a coping plan to deal with anxious experiences (modifying anxious self-talk into coping self-talk), d) evaluating the success of the coping strategies implemented, and engaging in self-reinforcement as appropriate and e) using these skills in imaginal and in vivo exposure sessions. Treatment is divided into two sections or halves. The first eight sessions involve the child learning a number of cognitive, behavioural and affectively-based strategies, which are then integrated into a 4-step coping or FEAR plan. The second eight sessions involve the child practicing the FEAR plan, using both imaginal and in vivo exposure.

The FEAR acronym helps children remember the steps to take when in anxious distress. The acronym FEAR represents: F, for feeling frightened (identifying somatic responses to anxiety), E, for expecting bad things to happen (self-talk modification), A, for attitudes and actions that can help (coping and problem solving strategies) and, R, for results and rewards (self-evaluation and reward/coping with failure).

Techniques underlying the FEAR plan include (a) identification of cues to anxious arousal, (b) relaxation, (c) imagery, (d) addressing maladaptive self-talk, (e) developing problem solving skills, and (f) learning to cope with both success and failure, through realistic self-evaluation. In addition, a number of treatment strategies are used to assist the child to develop these skills in a graduated sequence. These include (a) coping modelling, (b) role-play, (c) social and cognitive rewards, (d) homework and, importantly, (e) a collaborative therapeutic alliance (Kendall, Chansky, et al., 1992; Ronan & Deane, 1998). The graduated sequence of homework activities are called “Show-That-I-Can” (STIC) tasks and are designed to be completed between the sessions.

Parents are involved in the assessment and evaluation of the original programme; however, the overall intervention remains child-focused. A parent only session is included following Session Three. The therapist explains fully the details of the programme and encourages parental involvement in both the programme and homework activities. During treatment, parents are encouraged to act as coaches and models. Parents are asked to prompt their child to use his or her own personal FEAR or coping plan to deal with anxious experiences. Additionally, parents may find the programme helpful in addressing their own anxious concerns. Parents may be encouraged to implement and model coping strategies to manage their own stressful situations, which may result in a decrease of any reinforcement of their child’s fearful behaviour (Kendall & Gosch, 1994). For a more detailed description of the treatment programme, a manual is available from Philip C. Kendall (Kendall et al., 1990; see also Kendall, Chansky, et al., 1992).

Results have supported use of the programme. Kane and Kendall (1989) carried out initial multiple baseline research using this programme with four children diagnosed with overanxious disorder. Findings indicated that all four children showed

improvement on parent and independent clinician's ratings of anxiety as well as self-report. Furthermore, parents ratings of internalising symptoms (e.g., withdrawn, somatic complaints, anxious/depressed), as measured by the Child Behaviour Checklist (Achenbach, 1991a) were reduced from pre- to post-treatment. In general, the treatment gains reported at post-treatment were maintained at 3-6 month follow-up.

Two randomised clinical trials evaluating the 16 session programme have been carried out with anxious children. Forty seven children (aged 9-13 years) who had received a primary anxiety disorder diagnosis of overanxious disorder, separation anxiety disorder, or avoidant disorder, took part in the first trial (27 in the treatment condition, 20 in the wait-list control condition; Kendall, 1994). Results indicated that treatment was related to statistically significant positive change in self-report, parent report, and behavioural observation measures compared to the wait-list condition (Kendall, 1994). Importantly, results showed that 64% of children completing the programme no longer met criteria for their primary anxiety diagnosis at post-treatment. In addition, the treated children maintained these clinically significant gains at one-year follow-up (Kendall, 1994).

A second randomised trial evaluating the effectiveness of the 16 session programme was conducted with 94 children (aged 9-13 years) diagnosed with a primary anxiety disorder (60 in the treatment condition, 34 in the wait-list control condition; Kendall et al., 1997). Similar results were produced with over 50% of treated cases being free of their primary anxiety diagnosis after treatment (Kendall et al., 1997). Of those individuals whose diagnosis remained, significant reductions were recorded on severity scores across a number of indices. Maintenance of treatment gains were evident at one-year follow-up. As in the first trial, comparable treatment effectiveness was observed across gender and ethnicity in this study. Furthermore, Kendall and Southam-Gerow (1996) investigated long-term effects of this programme. They reported that treatment effects continued to be maintained at follow-up assessments up to three years later.

1.115 Family Based Applications of the CBT Programme

An issue raised by Kendall (1994) concerns the role that family and family processes play in the CBT programme developed by Kendall and colleagues (Kendall, Chansky, et al., 1992). Kendall suggests that active parental involvement is beneficial for positive

treatment outcomes in child therapy. There have been recent developments in investigating the potential role that family and social context may play in the development and maintenance of childhood anxiety. Findings to date indicate that high levels of control, restriction, attention to social threat, and endorsement of avoidant coping behaviours are associated with families of anxious children (Dadds et al., 1998).

In particular, parenting style is one factor that may influence the development and course of anxiety problems in children. It has been suggested that maladaptive anxiety may be learned in part through watching parents engage in fearful or avoidant behaviours (Kendall, Chansky, et al., 1992). It is possible that children imitate or pick up cues from the mother or significant other about how to respond to anxious experiences. It has been speculated that learning of emotional reactions to events may indeed be learned (or modelled by parents), and that this may help explain the higher concordance observed between maternal and child anxiety (Kendall, Chansky, et al., 1992). Barrett, Rapee, Dadds, & Ryan, (1996) also suggest that cognitive biases in children may be related to family styles or processes. It is now recognised that family interaction processes and parenting styles do in fact enhance avoidance behaviours in some anxious children (Barrett, Rapee, et al., 1996). Therefore, based on these findings, it would seem advantageous to include parents in interventions targeting the decreasing of avoidance behaviours in children.

A recent clinical trial investigated the effectiveness of involving parents in a CBT programme. Barrett, Dadds, et al. (1996) modified the original cognitive-behavioural treatment programme developed by Kendall and colleagues (1990) to incorporate a family management (FAM) training component. The FAM anxiety treatment had three main aims. First, parents were trained to reward courageous behaviour, while extinguishing excessive levels of anxiety. Second, parents were taught to manage their own anxiety, and third, parents were trained in communication and family problem solving skills (Barrett, Dadds, et al., 1996). Training in communication and problem solving focused on a) teaching skills to assist parents to respond to conflict b) teaching listening skills and promoting daily discussions to enhance positive communication and c) encouraging family-based problem solving discussions to assist in the management of child and family problems. The FAM intervention encouraged the child and their parents to work together as an "expert team" to solve anxious problems.

In the Barrett, Dadds, et al. (1996) study, seventy-nine children with overanxious, separation anxiety, or social phobia disorders participated in the trial. Treatment consisted of 12 sessions, with four sessions focusing on each content area; contingency management, coping with anxiety, and parent communication. In the CBT only condition sessions were 70 minutes duration. In the CBT plus FAM component, each treatment session was divided into two parts with total duration equivalent to the CBT only condition. The first segment involved the child working for approximately 30 minutes individually with the therapist. In the second segment, the parent, child, and therapist worked together for approximately another 40 minutes. In the family segment of treatment, the therapist taught the parents contingency management strategies such as reinforcement skills, planned ignoring, and giving and backing up clear instructions (Dadds et al., 1998).

Results indicated that of the children who received CBT alone 57% no longer met criteria for an anxiety disorder at post-treatment. The proportion increased to 71% at 6-month follow-up and 70% at 12-month follow-up. For children who received the CBT plus FAM condition, 84%, 84%, and 95% were diagnosis free at post-treatment, 6-month follow-up, and 12-month follow-up, respectively. In addition, in both treatment conditions (CBT and CBT+ FAM condition), scores on both internalising and externalising symptoms on the Child Behaviour Checklist-Parent (CBCL-P) decreased after treatment relative to the wait-list condition (Barrett, Dadds, et al., 1996).

It is interesting to note that CBT plus family treatment was significantly more effective than CBT only for children aged 7-10, but there were no differences observed between treatments for children aged 11-14 (Barrett, Dadds, et al., 1996). This suggests that for younger children, enhancing parental skills and actively involving parents in treatment may be particularly important.

Further developments have occurred in the area of including family in treating children with anxiety disorders. Howard and Kendall (1996) have developed an 18 session family based CBT, as an extension of their earlier treatment (Kendall, Chansky, et al., 1992) that was child focused. The family based therapy was evaluated using assessments from multiple sources (i.e., parent, child, teacher), and involved a multiple baseline (2, 4, and 6 weeks) across-cases design. In the programme, family members of

the anxious child were encouraged to examine their own experiences with anxiety, their attempts to cope with anxiety-provoking situations, and in particular, their anxiety about supporting their child's developing autonomy. Post-treatment results indicated meaningful treatment gains for the six children in the study. Additionally, treatment gains were clinically significant and generally maintained at 4-month follow-up.

1.116 Early Intervention

Recently in Australia, a controlled trial focused on identifying and intervening with children at risk for the development of anxiety disorders. The Queensland Early Intervention and Prevention of Anxiety Project (QEIPAP; Dadds, et al., 1997) evaluated the effectiveness of a cognitive-behavioural and family-based group intervention for preventing the onset and development of anxiety disorders in youth. Initially 1,786 children aged 7 to 14 years were screened for anxiety problems, with 128 children finally selected to participate in the programme. Children and parents were assigned to a 10-week school based psychosocial intervention, or a no-treatment monitoring group. Treatment was based on *The Coping Koala: Prevention manual* (Barrett, Dadds, & Holland, 1994) which teaches children strategies for coping with anxiety in a group format. This manual is identical to *The Coping Koala: Treatment Manual* developed by Barrett, Dadds, & Rapee (1991) and used in the study (Barrett, Dadds, et al., 1996) reviewed in the previous section. Both manuals are based on the original CBT programme developed by Kendall et al. (1990), and more specific descriptions of the interventions can be found in the Kendall and Barrett references previously cited.

Results from this study showed that as a group, the treated children had significantly lower rates of anxiety disorder at 6-month follow-up compared with those in the monitored group. It is important to note that 54% of the children in the monitoring group who initially had features of, but no formal anxiety diagnosis, progressed to a diagnosable disorder at the 6-month follow-up compared to only 16% in the intervention group. These findings indicate that early intervention was successful in reducing rates of anxiety disorders in children as well as being effective in reducing symptoms or early features of excessive anxiety. Overall, the results from family based

cognitive-behavioural studies provides further support for the inclusion of the family in cognitive-behavioural treatments for childhood anxiety.

1.12 BRIEF THERAPY

There has been an increased emphasis on psychosocial treatments using a brief therapy orientation in the last 10 years (Koss & Shiang, 1994). Brief treatment approaches have been particularly effective for dealing with less severe problems such as job related stress, anxiety disorders, depression, grief reactions, and post traumatic stress (Koss & Shiang, 1994). In relation to cognitive-behavioural interventions, most fit well within a brief therapy modality. In line with brief therapy tenets (Koss & Shiang, 1994), they tend to have a here and now orientation, and focus on current functioning, feelings, and patterns of behaviour. This is certainly true of the CBT programme used in the current study.

Koss and Shiang (1994) report that the major impact of treatment occurs early on in sessions of most psychotherapy orientations. Furthermore, comparative studies of brief and time-unlimited treatments show that there is little difference in outcomes between these two treatment modes (Koss & Shiang, 1994). It makes sense therefore, to continue to test and explore the potential benefits of brief psychotherapy.

It is also worth noting that the number of treatment sessions available for therapy to be conducted may be constrained by cost factors and by managed care policies (Weisz, Thurber, Sweeney, Proffitt, & Le Gagnoux, 1997). In pragmatic terms, brief therapy is cost-effective, as it reduces financial costs for the client or the funding agency, and reduces therapist time, allowing more individuals to be treated. Consideration of pragmatic issues such as available resources, funding of treatment, ACC entitlements, and therapist and client time, needs to be taken into consideration when making decisions on whether to use a brief therapy model.

Koss and Shiang (1994) report that at least 12 sessions are involved in empirically supported treatment programmes for children across a range of psychological problems. However, research also shows that a number of children will have stopped coming before reaching the 12-session mark (i.e., minimum number used thus far in CBT

programmes for anxious youth). For example, Weisz & Weiss (1989) report that most referred children and families at outpatient child clinics attended fewer than 10 sessions before terminating or dropping out. The reality of clinical practice may mean that the average child referred for therapy may not be in treatment long enough to complete the average empirically supported child therapy programme (Weisz et al., 1997).

To summarise, in the last decade, there has been an increased emphasis on brief therapy treatment methods (Koss & Shiang, 1994). Smith, Glass, & Miller (1980, cited in Koss & Shiang, 1994) comment that there is now strong evidence supporting the efficacy of brief therapy with certain groups of people that include individuals with anxiety disorders. Given that attrition from psychotherapy is likely to occur early on in treatment, and that there are pragmatic and cost related issues now impacting on clinical practice, it is important that research tests whether briefer forms of therapy for various child problems can produce significant benefit (Weisz, et al., 1997). The current study had this as a major aim.

1.13 THE PRESENT STUDY

1.131 Goals of the Present Study

The current thesis is intended to examine the effects of a brief intervention for children diagnosed with an anxiety disorder. The brief intervention is a shortened version (eight sessions) of a 16 session manualised cognitive-behavioural treatment programme developed by Kendall et al. (1990) and described earlier. The present study aimed to assess whether this shortened version could be effective in treating youth with anxiety disorders. A single-case experimental design was employed, with four children receiving the intervention. The children received eight to ten sessions, typically held once a week, for approximately 75 minutes with variations made for holidays or conflicting schedules.

Strategies employed included (a) recognising anxious feelings and somatic reactions (b) cognitive restructuring in anxiety-provoking situations (c) developing problem-solving steps to manage anxious reactions, and (d) self evaluating performance and administering self-reinforcement where appropriate. In addition, behavioural techniques

such as relaxation, modelling, role-play, in vivo exposure, and contingent reinforcement were used to reduce anxiety, and build coping skills.

The present intervention also aimed to include greater parental involvement than the original 16 session manualised treatment programme. Forty minutes of every session were spent working with the child, 15 minutes were spent with the parents, and 20 minutes of each session were spent with both the parents and the child. During the parent and child part of the session, the teaching components and coping strategies learned by the child were demonstrated and reinforced in front of the parents. In the parent portion parents were encouraged to model and coach their children outside of the therapy sessions using contingency reinforcement methods taught in the first two meetings.

The overall goal of the present study then was to evaluate the effectiveness of a brief cognitive-behavioural intervention for children diagnosed with an anxiety disorder. It was expected that the participants would no longer qualify for an anxiety disorder following the intervention. It was also expected that participants would show improvement on internalising and externalising symptoms and specific anxiety-related behaviour following treatment. Additionally, it was predicted that participants would show improvement on anxiety symptoms and coping behaviour related to specific anxious situations, both during and following treatment, but would not show improvement on the same measures during varying lengths of baseline assessment. It was further hypothesised that parents' own reports of internalising symptoms (i.e., anxiety and depression) would improve after the intervention.

CHAPTER 2. METHOD

2.0 PARTICIPANTS

Four children who met DSM IV (APA, 1994) diagnostic criteria for an anxiety disorder and one or both parents participated in treatment. Initial diagnoses of the participants are presented in Table 1. All the children were noted by teachers to be of average to above average intelligence as indicated on the Teacher Report Form (Achenbach, 1991b). All participants resided with both parents. A brief summary of each case is outlined, and to ensure confidentiality, fictitious names have been given to the children.

Participant 1

Rebecca, an 8 year-old Caucasian girl, was referred for treatment because of excessive social concerns, and problems at school. Social issues related to initiating conversation with others, and managing social activities with her peers, while school concerns related to performing in front of others, and actively participating in group and class activities. Rebecca also had specific phobia issues related to a fear of house fires (her neighbour's house burnt down several months earlier), and bees, after being stung earlier in the year. Somatic complaints included frequent stomach aches before school, sweaty hands, and problems getting off to sleep at night. Rebecca's mother reported that her daughter was nervous, often unable to sit still, and was easily distracted. Anxious situations targeted on the Coping Questionnaire and monitored during treatment included a) asking the teacher for help, b) talking to grown-ups, and c) speaking in front of the class.

Participant 2

Abbie, an 8 year-old Caucasian girl, was referred to the programme because of pervasive concerns about her performance, not coping well with new experiences, and health and family worries. Excessive anxiety related to perfectionist concerns, social or interpersonal issues, and general evaluation concerns, both at school and in her hobbies (i.e., dance class). Abbie was extremely self-conscious, and overly concerned about her competence in a number of areas, although she was very capable. For example, at

school Abbie worried about people teasing her, and people laughing at her, during class activities. Physical symptoms included an inability to relax and stop worrying at night, aching muscles, and at times, poor concentration. School difficulties centred on work and peer related issues such as performing in front of others, and doing well in her academic work. Specific phobia problems related to spiders, bees, darkness, and in particular costumed characters (after a frightening experience at a Christmas parade several years earlier). Anxious situations targeted on the Coping Questionnaire and monitored during treatment were a) doing things in front of the class, b) trying to sleep but can't because of worrying about things, and c) taking tests at school.

Participant 3

John, an 11 year-old Caucasian boy, was referred for treatment because of social evaluation fears and generalised anxiety related to a number of issues. His extensive avoidance of social events related to his fear of doing something that would make him feel ashamed or embarrassed. John was extremely shy and self-conscious and did not like initiating any interaction with unfamiliar people. Generalised concerns included perfectionist tendencies, and concerns about the health and safety of himself and his family. Specific physical complaints were feeling tired, frequent headaches, stomach aches, and sleep difficulties due to lying awake at night and worrying. Although John was both academically and physically competent, he worried about not doing well, and put considerable pressure on himself to perform. Anxious situations targeted on the Coping Questionnaire and monitored during treatment were a) speaking to new or unfamiliar people, b) doing something in front of the class, and c) worrying about Mum and Dad.

Participant 4

Laura, a 10 year old Caucasian girl, was referred to the programme because of separation concerns and generalised anxiety. Specific fears related to excessive worrying about her family and any changes in routine (i.e., new experiences, staying with friends or relatives). Laura worried about her parents forgetting to pick her up from school and from after school activities. She also wanted to be able to stay overnight with a friend but thus far had not been able to do this. Laura was reportedly a talented

gymnast. However, she worried about relating to the other girls in the gym class, and wanted her parents to stay for the entire session (2 hours) each week. Somatic problems included not getting off to sleep easily, having tense and sore neck and arm muscles, having a lack of energy, and, at times, being tearful. Laura worried about her health and appearance and sleep walked when under stress. Her parents reported that Laura also had difficulties concentrating and staying focused on tasks, completing activities, and often did not finish chores and homework. Anxious situations targeted on the Coping Questionnaire and monitored during treatment were a) sleeping over or thinking about sleeping over at a friend's house, b) going or thinking about going to gymnastics, and c) trying to sleep but can't because of worrying about things.

2.1 MEASURES

2.11 Assessment

When working with children, it is important to conduct an in depth evaluation, involving multiple measures, and including informants important in the child's life. A comprehensive, multimethod assessment was carried out as recommended in the child therapy and research literature (Kendall & Morris, 1991; Ronan, 1996). The assessment process included a structured diagnostic interview, self-report inventories, and parent and teacher reports of the child's functioning. This allowed for assessment of all three response domains: physiological, cognitive, and behavioural.

The instruments selected for the present study have known reliability and validity, and are extensively used in the treatment of anxiety disorders in children. These measures have also demonstrated sensitivity to the effects of the treatment programme on which this programme is based (Kendall, Chansky, et al., 1992).

2.12 Structured Diagnostic Interview

Anxiety Disorders Interview Schedule For Children

A structured clinical interview, the Anxiety Disorders Interview Schedule for Children (ADIS-C; Silverman, 1987), and the parallel version for parents (ADIS-P), were

administered to assess for any anxiety disorder diagnoses. The interview has the advantage of gaining information about the child's developmental history and current problems from the perspective of both the child and the parents (Kendall, Chansky, et al., 1992). The ADIS-C has undergone revisions to make it compatible with DSM IV and to improve its usefulness with younger children (Silverman, 1994). The measure is increasingly used by childhood anxiety researchers, due to its high reliability, its structure which helps enhance rapport, and its ability to provide specific in-depth information on childhood anxiety (Ronan, 1996).

Although the ADIS-C and the ADIS-P were developed specifically for the diagnosis of childhood anxiety disorders, they also allow the assessor to assess for any additional disorders. Silverman (1994) comments that the ADIS-C renders a comprehensive assessment of emotional and behavioural functioning. The instrument gives quantified data on anxiety symptomatology, aetiology, and course, while also providing for a functional analysis of the disorder.

The interview has high interrater reliability (e.g., $r = .98$ for the parent interview and $r = .93$ for the child interview; Silverman & Nelles, 1988). Agreement between child and parent report during clinical interviews ranges from moderate to good; however, agreement on the diagnosis of anxiety disorders is often lower (Ronan, 1996). Ronan comments, that in relation to childhood anxiety diagnoses, parents may report fewer internalising behaviours (e.g., related to depression and anxiety) than the child. However, parents are more likely to agree with their child on more observable symptoms related to the child's functioning, such as restlessness or being easily distracted. The interview has shown sensitivity to cognitive-behavioural interventions for youth with anxiety disorders (Kendall, 1994; Kendall et al., 1997).

2.13 Children's Self-Report Measures

Revised Children's Manifest Anxiety Scale (RCMAS).

The Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) is designed to measure generalised, non-specific anxiety in children and adolescents between the ages of 6 and 19 years (Gresham, 1989). The RCMAS is a

revision of the Children's Manifest Anxiety Scale (CMAS; Castaneda, McCandless, & Palermo, 1956), which was criticised for being too lengthy, too difficult to read, and included a number of poor test items (Kendall & Ronan, 1990).

The RCMAS contains 37 yes-no items, with a Total Anxiety score made up of 28 items, and the remaining 9 items comprising a Lie Scale. The Lie Scale is designed to detect acquiescence, social desirability or faking of responses, and is considered to be a positive feature of this instrument (Gresham, 1989). Three anxiety sub-scale scores: (a) Physiological Anxiety, (b) Worry/Over-sensitivity, and (c) Social Concerns/Concentration, can also be calculated. Reynolds and Richmond (1978) advise that these scales be interpreted cautiously due to limited reliability levels, and recommend that they only be used to assist with hypothesis generation.

Internal consistency coefficients for the RCMAS range from 0.78 to 0.85 across age, and test retest reliability coefficients range from 0.68 (nine months) to 0.98 (3 weeks) (James, Reynolds, & Dunbar, 1994). Gresham (1989) comments that the RCMAS is a well-standardised, self-report measure of anxiety with adequate internal consistency.

Validity has been well demonstrated. For example, the RCMAS has correlated .85 with the State-Trait Anxiety Inventory for Children, Trait Anxiety sub-scale (STAIC-T). In addition, a lower and non significant correlation was found with the State Anxiety sub-scale (A-State, Spielberger, 1973). The RCMAS has demonstrated sensitivity to treatment effects in studies of children and adolescents with anxiety disorders (Kendall, Chansky, et al., 1992, Kendall, 1994).

State-Trait Anxiety Inventory for Children (STAIC).

The State Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973) was used to assess situational and temporal variations in perceived anxiety (state), as well as more enduring anxiety tendencies (trait) in the participants. The STAIC was developed by Spielberger (1973) to measure both acute (state) and chronic (trait) anxiety in children between the ages of 9-12 years.

The instrument consists of two separate 20-item scales: the State Anxiety scale (A-State), and the Trait Anxiety scale (A-Trait). Each of the item statements on the scales has three response options. The A-State scale instructs children to think about their feelings “at this very moment”, each item beginning with the words “I feel”, followed by options along a continuum with the same descriptor. For example, Item 1 states, I feel *very calm, calm, not calm*. The A-Trait scale asks respondents to think about how they “usually feel”, and consists of the response options, *hardly ever, sometimes, and often*, for all 20 items.

Scores on both the STAIC A-State and A-Trait scales, can range from 20 to 60. For the A-State scale, items where the key term indicates anxiety, *very* and *not* are assigned values of 3 and 1 respectively. For items where the key term indicates the absence of anxiety, the order of weighting is reversed; *very* and *not* are assigned values of 1 and 3 respectively. The value of 2 is given to all responses where the child endorses only the adjective or descriptor (Spielberger, 1973).

Internal consistency coefficients for the two STAIC scales are reasonably good ranging from 0.78 to 0.87. Test-retest reliability coefficients range from between 0.65 to 0.72 for the A-State scale, and from between 0.44 to 0.94 for the A-Trait scale (Kendall & Ronan, 1990). Additionally, concurrent validity with other anxiety measures (RCMAS, STAI) has been demonstrated (Kendall & Ronan, 1990). Normative data are available (Spielberger, 1973). In the present study, the STAIC-S and the STAIC-T were used in pre- and post-assessments. The STAIC-T was also used during the programme to obtain weekly assessments of children’s trait anxiety.

Children’s Depression Inventory (CDI).

Due to the high incidence of comorbidity between anxiety and depression in youth, it is important to include a measure of depression in the assessment battery. The Child Depression Inventory (CDI; Kovacs, 1981) is currently the most frequent self-report instrument used to measure depressive symptomatology in children and adolescents (Reynolds, Anderson, & Bartell, 1985). Kovacs (1992) reports that the CDI is a useful initial screening measure for depression which needs to be integrated with other

diagnostic information, such as the clinical interview, and direct observation of the child.

The CDI has 27 items related to the cognitive, behavioural, and affective signs of depression. It is designed to measure the severity of depressive symptoms in children and adolescents between the ages of 8 and 17 (Kovacs, 1992). Each item consists of three statements that describe a range of symptoms from normal to severe. The statements are keyed 0,1,2, with higher scores indicating increasing severity of disturbance in depressive symptoms. The child selects the statement that best describes him or her over the past 2 weeks. A total CDI score is obtained, as well as a number of sub-scale scores; negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem (Kovacs, 1992).

Kavan (1992) reports the internal consistency and validity of the CDI appear adequate. Internal consistency estimates for the CDI are generally above 0.80, and CDI scores have correlated in the expected directions with measures of related constructs, such as negative cognitive attributions, hopelessness, and self-esteem (Kazdin, 1990). Information on the reliability and validity of the CDI, as well as normative data, are available from the updated manual (Kovacs, 1992). The CDI has shown sensitivity to anxiety treatment for children (Kendall, 1994; Kendall et al., 1997).

When using the CDI to assess depressive symptoms in children, there is a need for caution in interpreting the results. The CDI does not have adequate sensitivity to diagnose depression; however, it is a good indicator of self-reported distress (Fristad, Emery, & Beck, 1997).

Coping Questionnaire – Child (CQ-C).

The coping ability of the children in specific anxiety-provoking situations was measured using the Coping Questionnaire-Child (CQ-C; Kendall, Chansky, et al., 1992). The CQ-C assesses a child's self-perceived ability to cope with personally anxiety producing situations that appear to be particularly problematic. In line with functional analytic principles, the assessment is thus individualised. Three situations identified in the parent and child interviews as being most distressing to the child are listed on the Coping

Questionnaire. The child rates each situation on a 1- to 7- point scale ranging from *not at all able to help myself* (1), to *completely able to help myself feel comfortable* (7). The average of the three ratings provides a measure of the child's perceived coping ability (Howard & Kendall, 1996).

Over a 2-month interval, test-retest reliability for 20 subjects with anxiety disorders was reported to be .46 (Kendall, 1994). The Coping Questionnaire has demonstrated sensitivity to cognitive-behavioural treatment for children and adolescents with anxiety disorders (Kendall, Chansky, et al., 1992; Kendall et al., 1997). Additionally, Kendall Chansky, et al. (1992) comment that the CQ provides a baseline for major target behaviours dealt with in therapy, and is useful to help measure ongoing treatment effectiveness. It was used in that way in the current study.

Negative Affect Self-Statement Questionnaire (NASSQ).

Cognitive features were measured using the Negative Affect Self-Statement Questionnaire (NASSQ; Ronan, Kendall, & Rowe, 1994). The NASSQ is designed to assess self-statements related to negative affect in children and young adolescents aged 7 to 15. Children are asked to endorse self-statements on a scale ranging from *not at all* (1) to *all the time* (5), which represents the frequency with which each thought occurred during the past week (Ronan, et al., 1994; Ronan & Kendall, 1997).

The NASSQ is comprised of two separate scales of anxious self-talk: one for 7-10 year olds, and one for 11-15 year olds. The NASSQ for 7-10 year olds consists of 14 items, while the NASSQ for 11-15 year olds consists of 39 items. A total score is obtained by calculating participants' responses to each item, with positive items needing to be reversed (Ronan et al., 1994). Kendall et al. (1997) report the NASSQ to be internally reliable, with a retest reliability of .73 over a 2-month interval. Relationships with anxiety and depression measures support the concurrent and construct validity of the instrument (Ronan et al., 1994).

As the intervention incorporates cognitive components, an inclusion of a cognitive assessment measure such as the NASSQ can be particularly useful in providing specific information on the child's internal dialogue. Ronan (1996) comments that responses

endorsed on the NASSQ can be used by the clinician to assist in treatment planning. The NASSQ can also be helpful during treatment if the child is initially reluctant to disclose negative self-talk in face-to-face meetings. The NASSQ subscales have been shown to differentiate anxious from non-anxious children; children diagnosed with anxiety reported greater numbers of anxious self-statements than control-group children (Treadwell & Kendall, 1996). In terms of treatment sensitivity, the NASSQ has shown sensitivity to cognitive-behavioural therapy for childhood anxiety (Kendall et al., 1997; Ronan et al., 1994).

2.14 Parent Measures

Self Report

State-Trait Anxiety Inventory, Trait Version (STAI-T; Spielberger, 1983).

The STAI is a self-report anxiety measure extensively used in research on anxiety and in clinical practice (Spielberger, 1983). It has two separate scales that assess state and trait anxiety. The trait version (STAI-T) of the STAI is a 20-item scale that measures a stable tendency to experience anxiety. The STAI-T requires respondents to indicate to what degree they feel each symptom “generally”, on a 1 to 4 scale: (1) almost never; (2) sometimes; (3) often; (4) almost always. Total scores range from 20 to 80, with higher scores indicating greater anxiety.

Test-retest reliabilities for the STAI-T are high, ranging from .73 to .86 (Spielberger, 1983). Evidence for construct validity is provided in the manual (Spielberger, 1983), with the STAI-T discriminating between non-psychiatric patients and psychiatric patients for whom anxiety is a major feature. In relation to concurrent validity, the STAI-T correlates relatively highly with other trait anxiety measures (IPAT Anxiety Scale, and the Taylor Manifest Anxiety Scale) ranging from .73 to .85 (Spielberger, 1983).

Beck Depression Inventory – Second Edition (BDI-II)

Depressive symptoms in parents were assessed using the Beck Depression Inventory – Second Edition (BDI-II, Beck, Steer, & Brown, 1996). The BDI-II is a substantial

revision of the original instrument (BDI) that was developed by Beck, Ward, Mendelson, Mock, and Erbaugh (1961), and is a revised version of the amended Beck Depression Inventory (BDI-IA; Beck, Rush, Shaw, & Emery, 1979). This version of the inventory (BDI-II) corresponds to criteria for diagnosing depressive disorders set out in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders – 4th edition* (DSM-IV; 1994). Items were reworded and new items added to make the questionnaire more consonant with DSM-IV criteria.

The BDI-II is a 21-item self-administered questionnaire which measures the intensity of depression based on systematically derived symptomology. Each of the 21 items is rated from 0-3 and a total score is calculated by summing the 21 ratings. Respondents are asked to indicate which statement in each group of statements best describes the way they have been feeling in the last two weeks, including today.

The BDI-II follows on from 35 years of accumulated psychometric data and clinical experience with the BDI and BDI-IA (Beck, Steer, & Brown, 1996). The manual (Beck, Steer, & Brown, 1996) provides results on initial reliability and validity studies carried out using the BDI-II. Internal consistency of the BDI-II for an outpatient sample of 500 individuals was .92 and for a sample of 120 college students, .93. Test-retest stability of the BDI-II over a one-week period was .93. Convergent and discriminant validity, along with evidence of factorial validity, are also reported in the manual (BDI-II, Beck, Steer, & Brown, 1996).

Parent Report of the Child

Child Behaviour Checklist /4-18 - Parent Form (CBCL/4-18).

General aspects of childhood functioning in the participants were assessed using the Child Behaviour Checklist for Ages 4-18 (CBCL/4-18; Achenbach, 1991a). The CBCL/4-18 is a revision of the original CBCL developed by Achenbach & Edelbrock (1983). The purpose of the instrument is to measure in a standardised format, parents' reports of their child's competencies, emotional functioning, and behaviour problems (Christenson, 1992). The CBCL/4-18 is a widely employed assessment instrument used

extensively in research, medical and school settings, and in clinical practice (Achenbach, 1991a).

The CBCL/4-18 consists of two major sections: social competencies, and problematic behaviours. The 20 social competence items assess the amount and quality of the child's participation in areas such as: sports, hobbies, friendships, and social interaction. Three scale scores Activities, Social, and School, as well as a Total Competence score, can be calculated from the competence items. The 118 problem items provide scores for the following scales: Total Problems, Internalising, Externalising, Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behaviour, Aggressive Behaviour (Achenbach, 1991a). Parents are asked to rate their child on the problem items using a 3-point scale: 0 = Not True (as far as you know); 1 = Somewhat or Sometimes True; 2 = Very True or Often True.

The CBCL/4-18 can be scored on a profile which shows the items and raw scores for each scale, plus percentiles and normalised *T* scores, based on norms of each sex in each age range (Achenbach, 1991a). Additionally, the CBCL/4-18 identifies two broad behavioural dimensions – internalising (e.g., anxious, depressed, withdrawal) and externalising (e.g., aggression, impulsivity). For the purposes of the present study, the internalising and externalising scores, and anxiety /depression scale were used in the analysis. The internalising score is obtained by summing the raw scores of the scales; Withdrawn, Somatic Complaints, and Anxious/Depressed. The externalising score is obtained by summing the raw scores of the scales; Delinquent Behaviour and Aggressive Behaviour.

The CBCL/4-18 has high reliability and good inter-parent agreement, and has extensive normative data for normal and clinical populations in the United States (Achenbach, 1991a). Some normative data based on a New Zealand sample of over 200 children (Donaldson, 1997) is also available. Achenbach reports that content validity of the CBCL/4-18 is supported by the ability of most CBCL items to discriminate between demographically matched clinic referred and non-referred children. The CBCL/4-18 is sensitive to treatment effects for childhood anxiety (Kendall, 1994; Kendall et al., 1997).

State-Trait Anxiety Inventory for Children – Modification of Trait Version for Parents (STAIC-T-P).

Chronic or more enduring anxiety tendencies in the participants were also assessed by the parents using the State-Trait Anxiety Inventory for Children- Modification of Trait Version for Parents (STAIC-T-P; Strauss, 1987). The STAIC-T-P is a modification of the trait version of Spielberger's (1973) STAIC, and is designed to be used as a parent rating of the child's trait anxiety. The STAIC-T-P has adequate psychometric properties (Kendall & Southam-Gerow, 1996). Kendall (1994) states that Strauss' (1987) modification of the STAIC has good discriminative validity and is sensitive to treatment effects for childhood anxiety.

In order to carry out a comprehensive assessment of the child's functioning, there is a need for data on the child's anxiety problems from multiple sources. Weekly STAIC-T-P reports helped to monitor change and evaluate treatment effectiveness during the intervention.

Coping Questionnaire- Parent (CQ-P).

The CQ-P parallels the CQ-C described previously. In this version, parents rate the child's ability to cope in the same three anxiety-provoking situations identified during the diagnostic interview (Kendall, 1994). The child's coping ability in each situation is rated on the same 1 to 7 point scale that is used in the CQ-C. An average of the three ratings provides an overall rating of the child's coping ability from the parents' perspective. Outcome data (Kendall, 1994; Kendall et al., 1997) indicate that the CQ-P is sensitive to the effects of anxiety treatment for children.

It is important to have an understanding of the specific coping difficulties the child experiences from multiple informants. The CQ-P (and CQ-C) was used as an ongoing weekly assessment of how the child was progressing in terms of some specific anxious situations that were targeted in treatment.

2.15 Teacher Measure

Child Behaviour Checklist- Teacher Report Form (TRF).

The Child Behaviour Checklist – Teacher Report Form (TRF; Achenbach, 1991b) was used to assess participants' problems and competencies in the social/emotional area, within the school setting. This assessment instrument mirrors the parent version of the CBCL, and provides information on the child's academic performance, adaptive functioning, and behavioural/emotional problems as rated by the child's primary teacher (Achenbach, 1991b). Christenson (1992) comments that the TRF is a well designed and well researched measure, that provides standardised descriptions of students problems and competencies, and demonstrates sound psychometric qualities. The assessment is based on observations made during the previous 2 months rather than the 6-month time period specified for the CBCL/4-18 parent form.

The TRF asks that teachers rate the child's current academic performance using five steps from, *far below grade level* to *far above grade level*. Additionally, teachers are requested to rate four general adaptive characteristics; how hard the child is working, how appropriately the child is behaving, how much the child is learning, and how happy the child is (Achenbach, 1991b). The Behaviour Problems Scale of the TRF is comprehensive, and includes eight subscales or syndromes (e.g., Anxious/Depressed, Withdrawn, Delinquent Behaviour, Aggressive Behaviour) which can be scored on a profile, in the same way as the CBCL/4-18 (Elliott & Brusse, 1992). Raw scores are converted to *T* scores, based on normative data, and broad band internalising and externalising scores can also be calculated.

For the purposes of the present study, the internalising and externalising scores, and anxiety /depression scale, were used in the analysis. The Internalising Problems score was obtained by summing the raw scores on the syndrome scales; Withdrawn, Somatic Complaints, and Anxious/Depressed. The Externalising Problems score was obtained by summing the raw scores on the syndrome scales; Delinquent Behaviour and Aggressive Behaviour. The total scores were converted to *T* scores, which were reported in the results.

Achenbach (1991b) reports that the TRF has shown comparable short-term and long-term stability, with correlations of 0.83 and 0.89 for girls and boys respectively over a 15-day interval. Elliott and Brusse (1992) state that the TRF has good to very good reliability and validity data. This supports its use, as a sound method for documenting the adaptive functioning, and problem behaviours of school-age children. Extensive information on the reliability, validity, and norms for the TRF is available (Achenbach, 1991b).

The parent and teacher versions of the CBCL allow a child's anxious behaviours to be compared across home and school settings (Kendall, Chansky, et al., 1992). Information from teachers is considered to be critical in determining how best to help the child, as they are often able to observe aspects of the child's functioning that are not apparent to parents or the clinician.

2.2 DESIGN

A multiple-baseline design across subjects was used, with the first two participants starting treatment after a two-week baseline period. The other two participants started treatment after a three-week baseline period. Treatment consisted of brief cognitive-behavioural therapy involving both the children and their parents. Multiple-baseline designs have been reported to be frequently used in clinical settings and to be useful in evaluating treatment effectiveness across a diverse range of clinical problems (Barlow & Hersen, 1984; Kazdin, 1994).

2.3 PROCEDURE

Initial contact with participants was gained through individuals contacting the researcher by phone call, in response to advertisements in the Palmerston North *Tribune* newspaper or local *school newsletters*. The advertisement asked for volunteers to take part in a study designed to help anxious children. Upon calling, brief details about the child were obtained, and the caller was provided with preliminary information about the research. Potential participants and their parents were then sent information sheets outlining the goals and nature of the research as well as procedures to be used in the intervention (see Appendix A and Appendix B). When the potential participants had

responded to the information sheets, informed consent from the children and the parents was obtained in writing (see Appendix C and Appendix D) during the first meeting.

Once potential participants and their parents consented to be involved in the study, the children undertook a screening procedure to ensure that they met the criteria of a primary diagnosis of a childhood anxiety disorder. The intake evaluation involved both the parents and the children participating in structured diagnostic interviews. In addition to the interview being used to assess for the presence of an anxiety disorder, the interview is also designed to help establish rapport, and gain information on the specific nature of the child's presenting problems. The child and parents were interviewed separately, and then if the child met the inclusion criteria, the parents and the child completed the other assessment measures. The TRF was completed by the child's primary teacher and was returned to the clinic by the parents. Children who did not meet the research criteria were provided feedback and referred appropriately.

The structured diagnostic interviews, child self-report, parent, and teacher report measures were administered pre-treatment, and post-treatment. All assessments were conducted by a trained independent assessor (a graduate student training as clinical psychologist). In addition, at every therapy session, anxiety features were assessed by child self-report using the STAIC-T. The parents completed the STAIC-T-P each week. Weekly parent and child reports of the child's coping skills were assessed using the CQ-C and the CQ-P. Additionally, a 3-month and a 12-month follow-up assessment, are to be conducted once treatment has finished, using measures administered in the pre-treatment and post-treatment evaluations.

Two children received eight (75 minute) sessions, and two children received ten sessions, typically held once a week, with variations being made (holidays, conflicting schedules) as needed. The programme took place over ten sessions for two of the children to enable them to complete exposure practices and work through some specific anxiety concerns. In the first 40 minutes of every session, the therapist worked individually with the child. In the remaining 35 minutes, the therapist worked with the parents and the child (see the Intervention section for more detail).

2.4 SETTING AND THERAPIST

Treatment took place at the Massey University Psychology Clinic, with some of the exposure situations carried out in the children's natural environments. Therapy was provided by the author in the final stages of her training as a clinical psychologist.

2.5 TREATMENT MANUAL

Therapy followed a 46-page manual (Girling-Butcher & Ronan, 1999) and is a shortened version of a cognitive-behavioural treatment programme developed by Kendall, Chansky, et al. (1992). The manual used in the present study outlines specific session objectives and describes goals and strategies to be implemented in each treatment session. As recommended in the literature, a flexible and clinically sensitive application of the programme was applied (Kendall, Kortlander, et al., 1992). For example, it was important to consider the participant's age, cognitive and social development, specific anxieties, family factors, including the amount of family support, and the family's capacity to assist the child with mastering new situations (Howard & Kendall, 1996).

2.6 TREATMENT MATERIALS

A number of programme resources and stimulus materials were used to facilitate and reinforce treatment goals and strategies, such as the recognition of anxious cues, modification of anxious self-talk, the development of coping plans, and the provision of rewards. Children were also given a workbook which outlined key concepts taught, and required the child to complete a range of exercises related to the therapy sessions. To reinforce and generalise the coping strategies taught, children were assigned homework tasks (referred to as STIC tasks – Show That I Can) to be completed outside of therapy. The children were rewarded with tangible (books, stationary, or small toys) or social rewards (doing a fun activity with the therapist) every second session for completed STIC tasks.

2.7 INTERVENTION

The participants received eight to ten sessions of cognitive-behavioural therapy, which involved helping them recognise anxious cognitions, and develop anxiety management strategies to cope with anxiety-provoking situations. Strategies employed included (a) recognising anxious feelings and somatic reactions (b) cognitive restructuring in anxiety-provoking situations (c) developing problem solving steps to manage anxious reactions, and (d) self-evaluating performance and administering self-reinforcement where appropriate. Behavioural techniques such as relaxation, modelling, role-play, exposure, and contingent reinforcement were used. The details of the treatment programme are provided in the treatment manual (Girling-Butcher & Ronan, 1999).

Approximately 40 minutes of each session was spent with the therapist working with the child only, and 15 minutes was spent with the parents only. In addition, approximately 20 minutes of each session involved the therapist working with the parents and the child together. During this time, the strategies taught to the child were demonstrated and reinforced in front of the parents. Parents were also encouraged to model and coach their children outside of the therapy sessions using contingency reinforcement methods. These methods were outlined to the parents in the first two sessions. Contingency management incorporated strategies that included praise, rewards and privileges, and planned ignoring. The planned ignoring strategy involved the parents immediately prompting the child to engage in coping strategies (that were being taught in therapy), when they observed their child engaging in anxious behaviour. Parents were then to withdraw attention from the child until the anxious behaviour ceased.

Coping behaviours were reinforced by parents through praise and tangible rewards and were agreed on by the child and their parents, with the assistance of the therapist. Additionally, strategies included rewarding courageous behaviour and extinguishing anxious behaviours identified from the diagnostic interview as being problematic for the child. To help parents become more involved, parent training in how to reward courageous behaviour and help extinguish excessive anxiety experienced by the child was carried out in the part of each session that included the parents only.

An overview of the concepts and strategies used in the treatment programme are outlined below.

Session One

The establishment of rapport, and an outline of the 4-step plan for coping with anxiety. The identification of anxious feelings, the normalisation of anxiety, and the introduction of relaxation training.

Session Two

A review of anxious feelings and the 4-step plan, and the identification of somatic responses to anxiety. The introduction of contingency management strategies including reinforcement and planned ignoring.

Session Three

The role of anxious self-talk in anxiety, and the development of coping-based self-talk. The exploration of the relationship between feelings, thoughts, and behaviour, and the continuation of relaxation training.

Session Four

A review of the modification of anxious self-talk into coping self-talk, and the development of problem solving skills to help manage anxiety. Additionally, the session focuses on self evaluation and self reward for success in managing anxiety, as well as learning to cope with failure.

Session Five

Practise of the 4-step plan, in low to moderate anxiety provoking situations using imaginal and in-vivo exposure. The exploration of different elements of anxiety experiences, and a review of the relaxation techniques taught.

Session Six

Application of the 4-step plan in in-vivo situations, producing moderate levels of anxiety.

Session Seven

Practise of coping skills in imaginal and in-vivo situations that produce high levels of anxiety.

Session Eight-Ten

Continued practise of the 4-step plan in a situation that produces a high level of anxiety, and the production of the child's videotaped commercial. A review of the treatment programme, and saying goodbye to the child and their parents.

2.8 TREATMENT INTEGRITY

An assessment of treatment integrity was conducted via audiotapes. A clinical psychologist familiar with the treatment programme, listened to four randomly selected sessions. A treatment integrity checklist was used to assess whether the intervention objectives, and procedures in the manual, were adhered to. No protocol violations were assessed; that is, treatment was carried out in accord with the manual's instructions.

2.9 ETHICAL CONSIDERATIONS

The research was conducted in accordance with the ethical guidelines of the New Zealand Psychological Society (1985). The study was reviewed and approved by the Massey University Human Ethics Committee. Potential participants and their parents were provided with information sheets outlining the nature of the research, and what would be expected of them if they wished to take part. It was expressed verbally and in written form that participation in the research was voluntary, and that they had the right to decline to take part in the study at any time and without treatment being denied.

Participants were fully informed concerning the goals and methods of the treatment programme. Written informed consent was obtained from both the children and parents. The researcher was aware of the power dimensions of the relationship between therapist and child. Therefore, special care was taken to ensure that the children participating were informed about the study, to the fullest extent possible, in language that they understood. Participants were encouraged to ask questions at any time during the treatment and about any aspect of the study.

Confidentiality was maintained for all participants. As in all treatment carried out at the Massey Psychology Clinic, assessments and case material was stored in the usual manner. All clinical records and case information was kept in a locked secure place, at the Massey Psychology Clinic. Tapes were coded, and also stored in a secure locked environment at the clinic. Only the researcher and her supervisor had access to the case material. After the study, audiotapes and videotapes were destroyed, or were, with the consent of the participants, stored in a research archive. For the purposes of presenting the research data, no participant was identifiable either in the raw data or in any reports.

As in all clinical cases involving children, the child's welfare was paramount. The research was considered to be of a low risk to the participants. There was close monitoring of how participants were progressing in treatment, and the researcher was willing to modify, or discontinue the treatment, if any participant was placed at risk. Treatment was closely monitored by the researcher's supervisor (a senior clinical psychologist) through screening of sessions and regular clinical supervision.

CHAPTER 3 RESULTS

3.0 CHILD DIAGNOSES

Diagnostic Reliabilities

In the current study, analysis of diagnostic reliabilities demonstrated that there was 100% agreement on anxiety diagnoses.

The major research goal of the study was that children would no longer qualify for an anxiety disorder following the intervention. Of course, all participants received a primary anxiety disorder diagnosis at pre-treatment (see Table 1). Table 1 also shows that all four participants no longer received a child anxiety diagnosis at post-treatment.

Table 1. Diagnoses over Time

Participant	Assessment Points	
	Pre-Treatment Anxiety Diagnosis	Post-Treatment Anxiety Diagnosis
1	SP Specific P GAD	No Diagnosis
2	GAD SP Specific P	No Diagnosis
3	SP GAD	No Diagnosis
4	SAD GAD	No Diagnosis

Note. SP = Social Phobia; Specific P = Specific Phobia; GAD = Generalised Anxiety Disorder; SAD = Separation Anxiety Disorder. The primary anxiety diagnosis for each participant is noted in bold. Participant 1: 8 yr old female; 2: 8 yr old female; 3: 11 yr old male; 4: 10 yr old female.

3.1 CHILD REPORTS

It was expected that participants would show improvement on child reported internalising symptoms and anxious behaviours following treatment. Child reports on outcome measures are presented in Table 2. Scores on the RCMAS suggest a reduction in chronic anxiety for three of the four participants. In particular, a marked reduction in anxiety symptoms was seen in the results of participant 3 and 4. Participant 1 entered the programme initially denying anxiety problems as indicated by a *T* score of 35, although from parent report and assessor and therapist observations, the child appeared to be experiencing excessive anxiety concerns, especially in relation to social situations.

Scores on the STAIC-S showed that for three participants there was a reduction in self-reported state anxiety following treatment. In contrast, participant 1 reported an increase in state anxiety after treatment though both scores were in the normal range. However, there were also beneficial changes reported in trait anxiety at post-treatment as measured by the STAIC-T for all participants, with participants 2, 3, and 4 showing substantial reductions.

Two of the four participants reported moderate levels of depressive symptoms ($CDI \geq 13$; Cole, Peeke, Martin, Truglio, & Seroczynski, 1998) at pre-treatment. Following treatment, CDI scores for all participants were below this level. Reductions in depressive symptoms appeared to parallel reductions in self-reported anxiety.

There were meaningful changes reported on the NASSQ after treatment for three of the four participants. Children's scores were substantially reduced at post-treatment, compared to pre-treatment. Participant 1's scores were quite low at pre-treatment and remained unchanged after treatment.

The coping ability of the participants as measured by the CQ-C indicated positive behaviour change over time. Child coping skills (scores averaged across the child's three target complaints) showed substantial changes from pre- to post-treatment. There was a significant increase in child reported coping ability following treatment for all participants.

Table 2. Child Self-Report Scores on Outcome Measures

Measure	Participant	Assessment Points	
		Pre-Treatment	Post-Treatment
RCMAS (<i>T</i> -score)	1	35	49
	2	45	44
	3	52	32
	4	68	41
STAIC-S (<i>T</i> -score)	1	50	56
	2	55	52
	3	52	49
	4	71	48
STAIC-T (<i>T</i> -score)	1	57	44
	2	58	26
	3	40	21
	4	76	22
CDI (Total)	1	3	3
	2	15	12
	3	3	0
	4	25	4
NASSQ (Total)	1	15	15
	2	39	16
	3	60	44
	4	46	14
CQ-C (Mean)	1	5.0	5.7
	2	2.7	6.5
	3	2.7	6.0
	4	1.0	3.3

Note. RCMAS = Revised Children's Manifest Anxiety Scale; STAIC-S = State Trait Anxiety Inventory for Children – State; STAIC-T = State Trait Anxiety Inventory for Children – Trait; CDI = Children's Depression Inventory; NASSQ = Negative Affect Self-Statement Questionnaire; CQ-C = Coping Questionnaire for Children.

3.2 PARENT AND TEACHER REPORTS

3.21 Parent Report

It was expected that participants would show improvement on parent reported internalising and externalising symptoms and coping behaviours following the intervention. Results show that scores on all outcome measures remained the same or improved after treatment. Parent reports of their child's internalising, externalising, and coping behaviours are presented in Table 3. Specifically, parent reports of the child's trait anxiety using the STAIC-C-P showed noticeable reductions from pre- to post-treatment. All parents reported decreases in their child's trait anxiety following treatment. For participants 1, 2, and 3, the same parent completed all measures. For participant 4 the father completed pre- and post-treatment assessments and attended two of the ten therapy sessions, while the mother attended the other eight sessions.

The coping ability of the participants as rated by their parents using the CQ-P indicated positive behaviour change over time. Parent reports of their child's coping (scores averaged across the child's three target complaints) showed substantial changes from pre- to post-treatment (see Table 3). There was a marked increase in parents' perception of the child's coping skills following treatment for all participants.

Parent reports of the child's internalising and externalising problems as measured by the CBCL-4-18 showed improvement over treatment. The results of the CBCL ratings are presented in Table 4. Three participants had internalising *T*-scores in the clinical range at pre-treatment ($T \geq 64$). In contrast, these participants' scores were reduced to under the clinical range at post-treatment. *T*-Scores on the anxiety/depression scale on the CBCL remained the same for one participant and decreased for three participants following the intervention. Results were as follows; Participant 1, pre = 59, post = 59; Participant 2, pre = 63, post = 56; Participant 3, pre = 70, post = 54; Participant 4, pre = 70, post = 61. Furthermore, although all participants had externalising *T*-scores within normal limits at both pre-and post-treatment, scores decreased following the intervention suggesting that some externalising behaviours decreased following treatment.

No formal method of measuring parent involvement in the current study was undertaken. However, at the post-treatment assessment the parents were asked a) How do you feel about the parent involvement in the programme? and b) What is your opinion of the parent only and parent and child sections of each session? Parents of all four participants stated that they believed their involvement and inclusion in the various parts of the sessions to be essential to the progress that their child made in treatment.

3.22 Teacher Report

It was expected that participants would show improvement on teacher reported internalising and externalising symptoms following the intervention. Results showed teacher reports of the child's internalising and externalising problems as measured by the TRF remained the same or showed improvement after treatment. The TRF for two participants was unable to be completed by the children's classroom teacher at the end of treatment due to treatment sessions continuing after the end of the school year. The TRF for these participants was obtained at Session Seven in their treatment. Results at this time were as follows; Participant 3, Internalising *T*-score = 51, Externalising *T*-score = 39; Participant 4, Internalising *T*-score = 62, Externalising *T*-score = 42. Internalising and externalising *T*-scores on the TRF for participant 1 and 2 are presented in Table 3.

Specifically, internalising *T*-scores for one participant remained relatively unchanged after treatment while one participant had substantially reduced scores following treatment. For participant 1, the internalising *T*-score was low at pre-treatment and remained low at post-treatment. For participant 2, the internalising *T*-score at pre-treatment indicated internalising behaviours in the borderline clinical range. After treatment, participant 2's internalising behaviours had decreased to within normal limits. Finally, externalising *T*-scores remained unchanged from pre- to post-treatment for the two participants in the study who had post-treatment results.

Table 3. Parent and Teacher Scores on Child Outcome Measures

Measure	Participant	Assessment Points	
		Pre-Treatment	Post-Treatment
<i>Parent Report</i>			
STAIC-T-P (Total)	1	36	30
	2	53	31
	3	53	31
	4	62	52
CQ-P (Mean)	1	2.7	5
	2	2.7	6.5
	3	2.3	6.0
	4	2.7	5.3
CBCL (Int. T)	1	55	55
	2	65	52
	3	77	59
	4	72	62
CBCL (Ext. T)	1	52	46
	2	40	32
	3	49	38
	4	52	50
<i>Teacher Report</i>			
TRF (Int. T)	1	37	37
	2	63	37
	3	56	NO
	4	63	NO
TRF (Ext. T)	1	42	42
	2	42	42
	3	46	NO
	4	42	NO

Note. STAIC-T-P = State Trait Anxiety Inventory for Children – Trait, Parent version; CQ-P = Coping Questionnaire – Parent report; CBCL (Int. T) = Child Behaviour Checklist (Internalising T-score); CBCL (Ext. T) = Child Behaviour Checklist (Externalising T-score); TRF (Int. T) = Teacher Report Form (Internalising T-score); TRF (Ext. T) = Teacher Report Form (Externalising T-score); NO = Not Obtained.

3.3 PARENT AND CHILD REPORTS ACROSS BASELINE, TREATMENT, AND POST-TREATMENT SESSIONS

It was proposed that participants would show improvement on anxiety symptoms and coping behaviour related to specific anxious complaints, during and following treatment but would not show improvement on the same measures during varying lengths of baseline. Results indicated that parent and child reports of trait anxiety, and parent and child reports of the child's coping skills, tended to remain stable during the baseline period and improved during and following treatment. The results of the trait anxiety and coping measures are presented in Figures 1-12. Abbreviations on the assessment axis of the figures refer to PT (pre-treatment or first baseline), B2, B3 (baseline), PT (post treatment).

3.31 Trait Anxiety

For each child, STAIC-T-P reports remained relatively stable during baseline and as the treatment was introduced, there was a decrease in parents reports of child trait anxiety across treatment (see Figures 1, 3, 5, and 7). Furthermore, on the STAIC-T the levels of child reported trait anxiety also remained relatively stable during baseline (with the exception of Participant 2 whose score decreased; however, parents STAIC-T-P score increased over baseline) and decreased during and following treatment (see Figures 2, 4, 6, and 8). These findings suggest that during baseline, initial monitoring produced little change in these measures; however, once children attended the programme, their anxiety symptoms and coping behaviour improved over the course of treatment. It is important to note that for participant 4, weekly assessments at pre-treatment, 3, and 5, were completed by the child's father, while all other assessments reported were from the child's mother.

3.32 Coping Skills of the Child

Children's coping skills as measured by the CQ-C and the CQ-P changed from pre- to post-treatment. As seen in Figures 9-12, weekly coping scores remained relatively constant during the baseline period (with the exception of participant 1, one went up, the other down), and steadily increased during and following treatment. Participant 1

reported an initially high self-reported coping rating; however, this was seen as being consistent with her lack of endorsement of anxiety symptoms across most measures at pre-treatment. The child demonstrated strong avoidant behaviours early on in treatment; however, a number of obvious physical symptoms of anxiety, such as talking rapidly, flushed cheeks, having difficulty making eye contact, and not being able to sit still were evident. It is noted that coping scores of the child and parent regressed towards their combined mean across baseline.

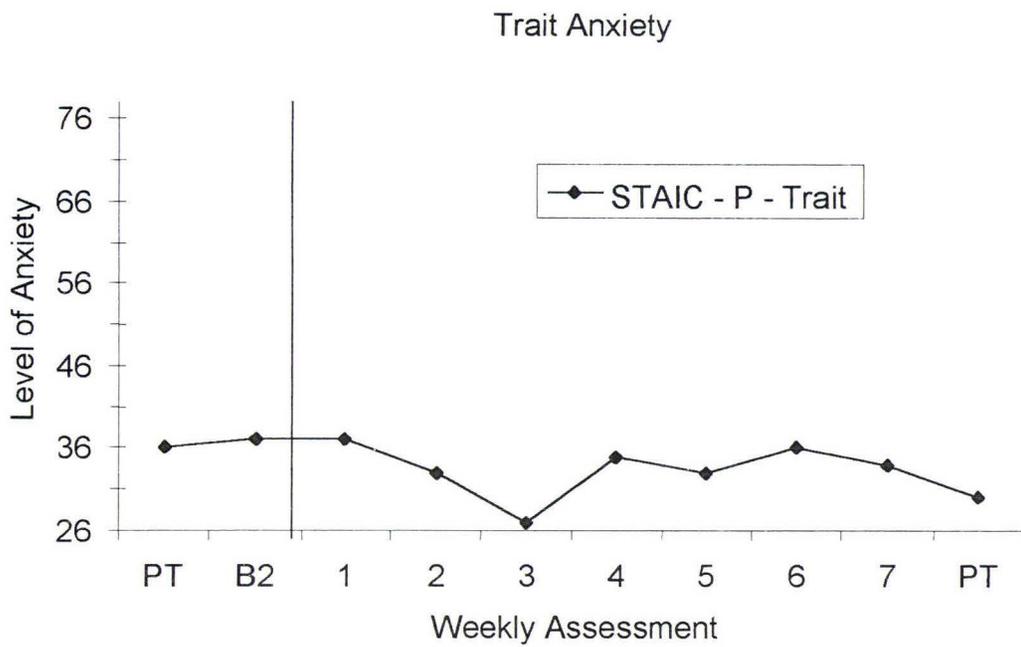


Figure 1. Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 1.

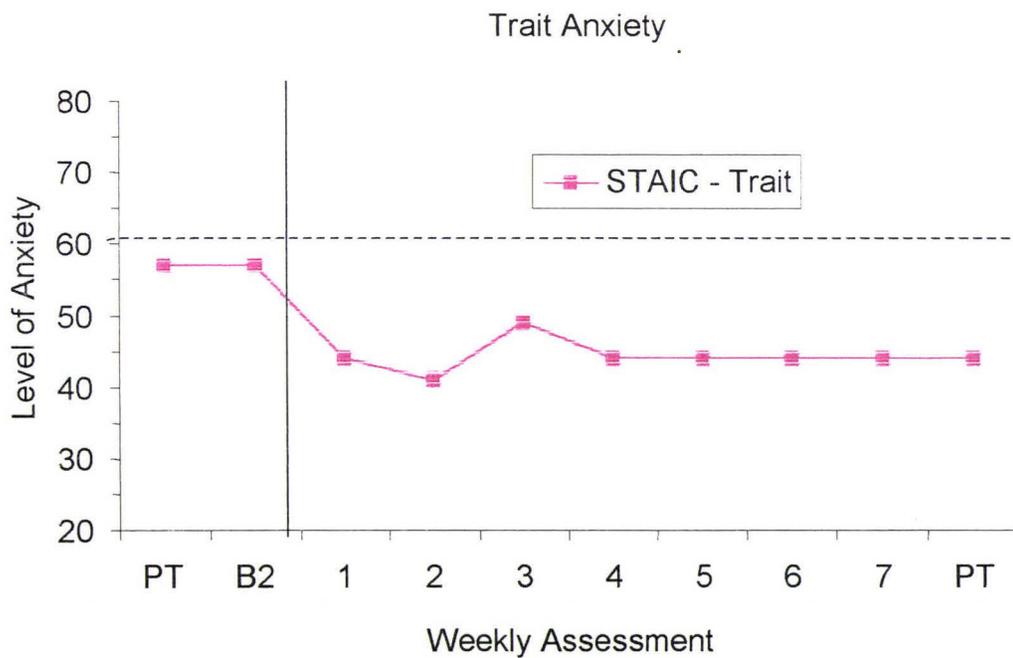


Figure 2. Changes in trait anxiety (*T*-scores) across assessment and treatment sessions for participant 1.

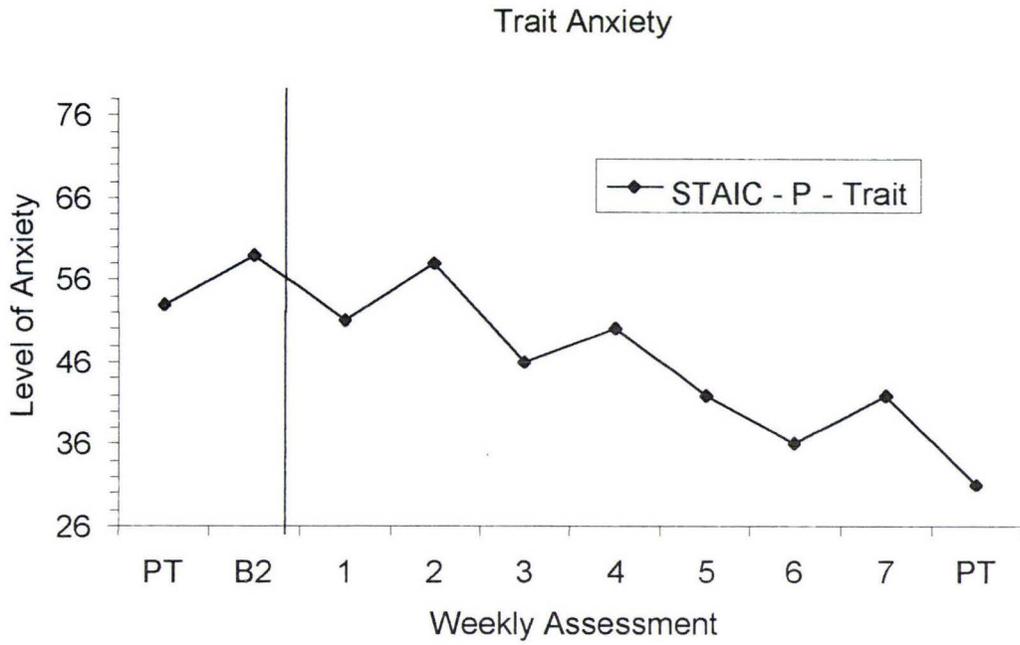


Figure 3. Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 2.

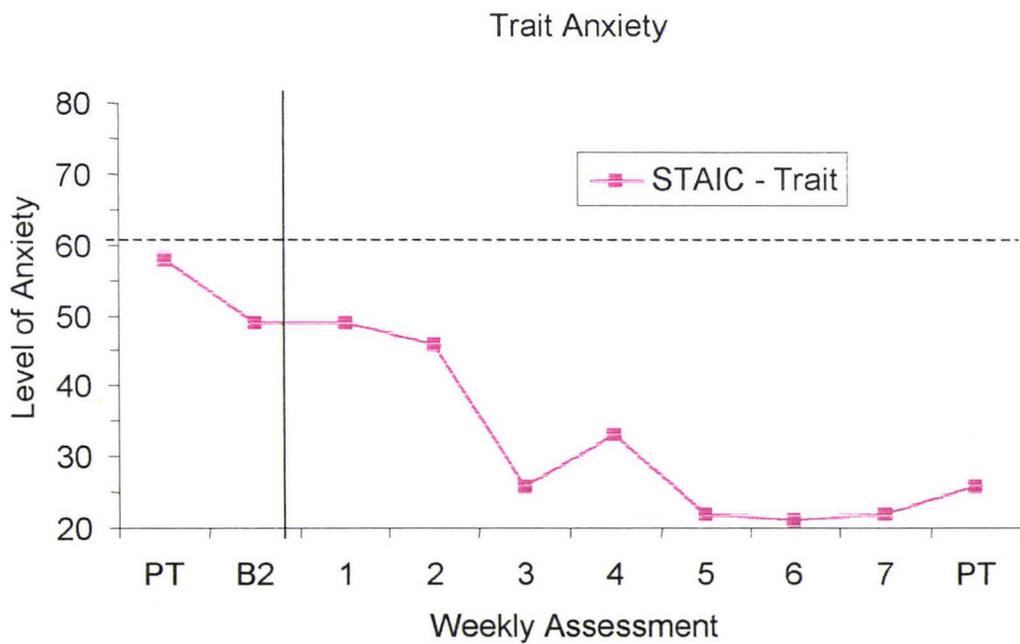


Figure 4. Changes in trait anxiety (*T*-scores) across assessment and treatment sessions for participant 2

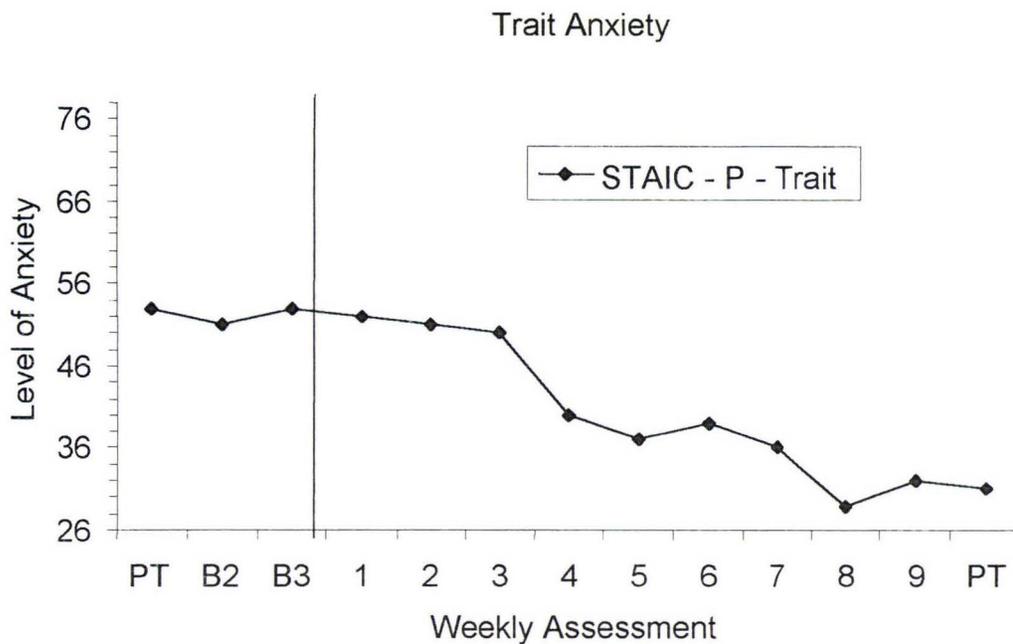


Figure 5. Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 3.

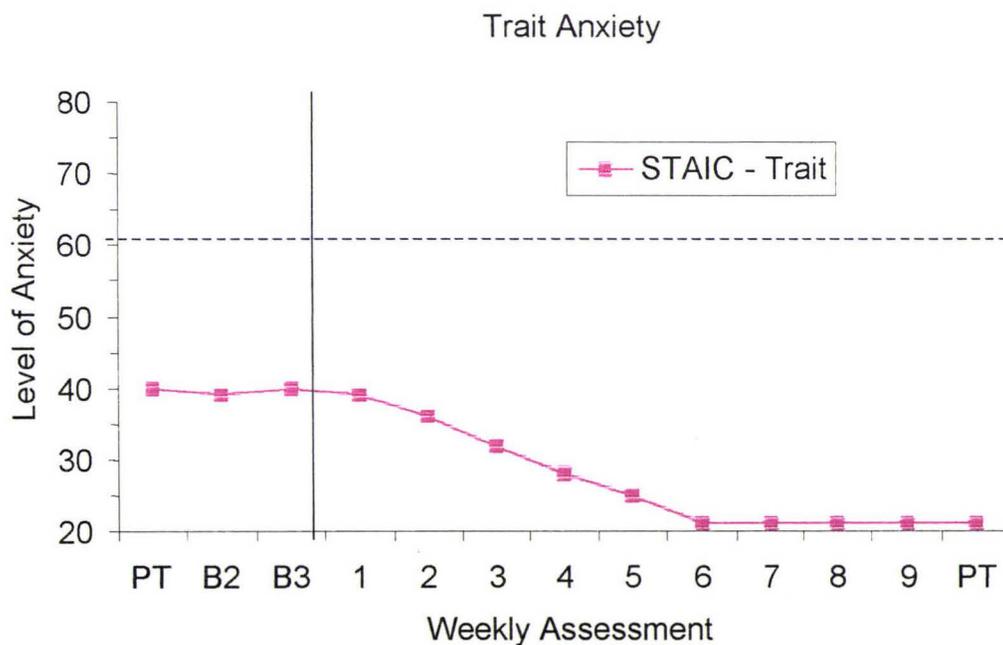


Figure 6. Changes in trait anxiety (*T*-scores) across assessment and treatment sessions for participant 3.

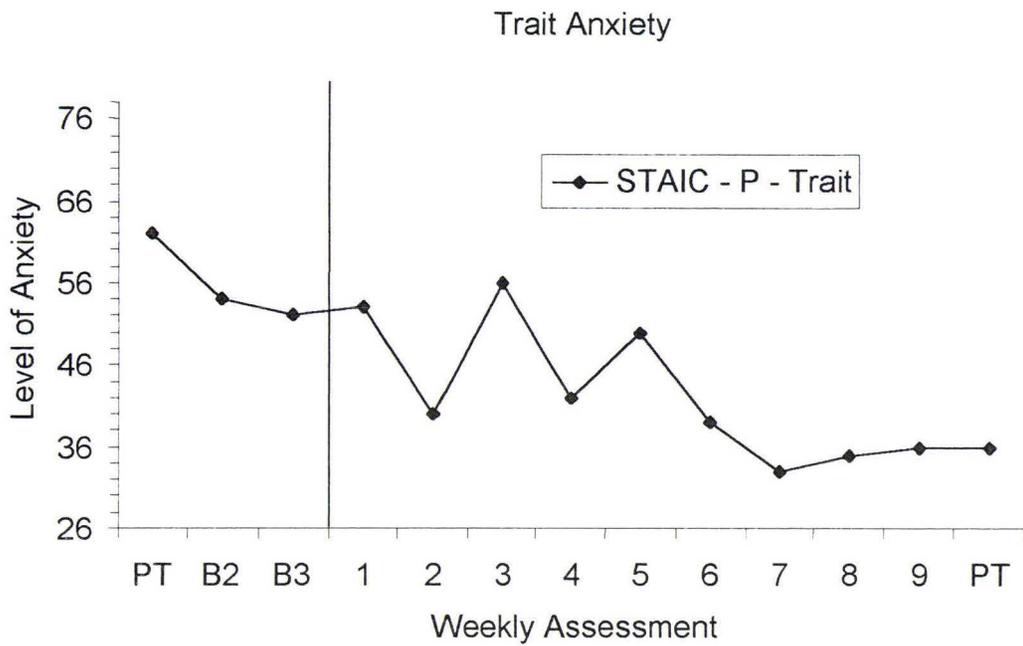


Figure 7. Changes in parent ratings of child trait anxiety across assessment and treatment sessions for participant 4.

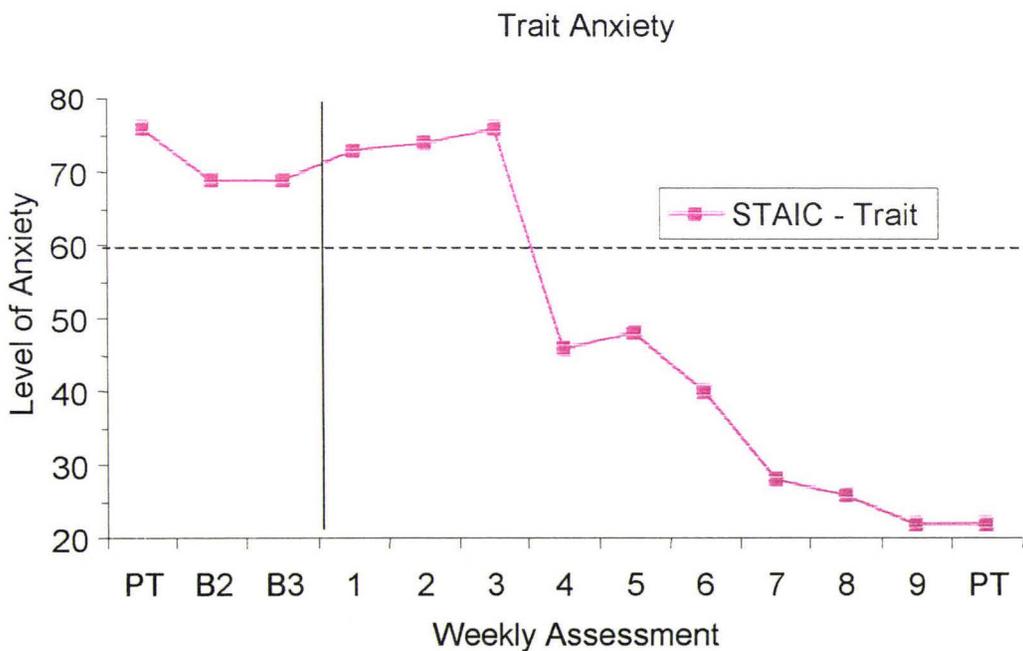


Figure 8. Changes in trait anxiety (*T*-scores) across assessment and treatment sessions for participant 4.

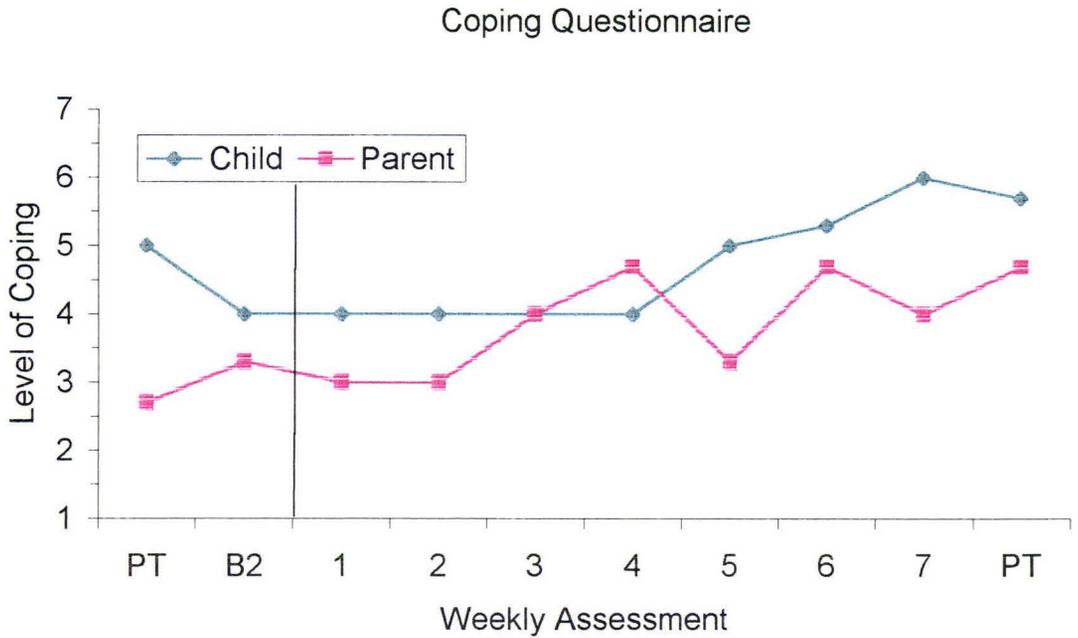


Figure 9. Changes in parent-reported and child-reported child coping skills [* average of scores for three target complaints across assessment and treatment sessions] for participant 1.

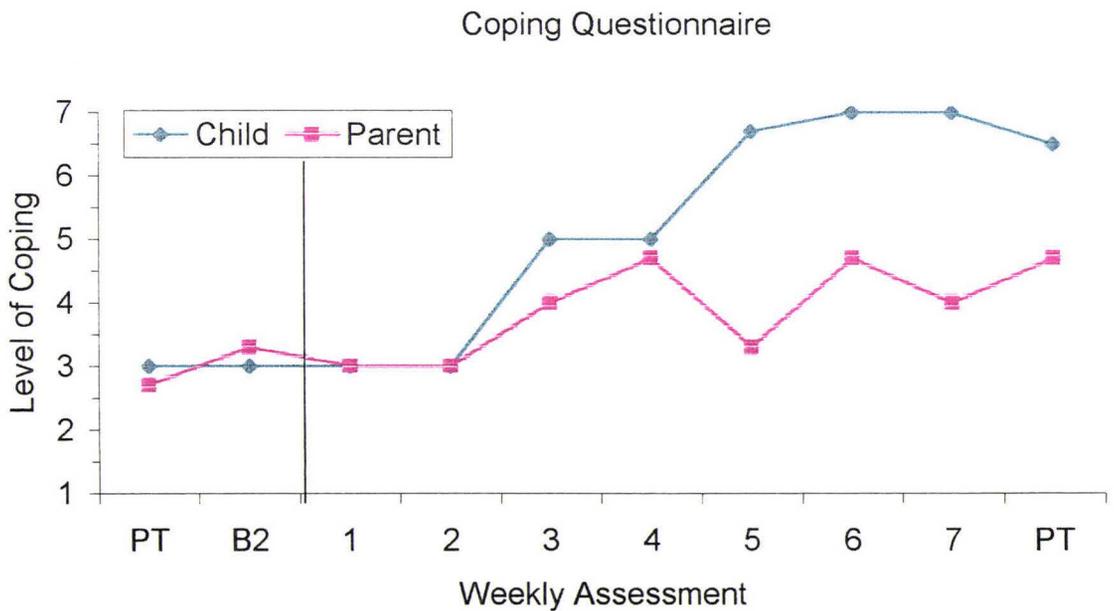


Figure 10. Changes in parent-reported and child-reported child coping skills [* average of scores for three target complaints across assessment and treatment sessions] for participant 2.

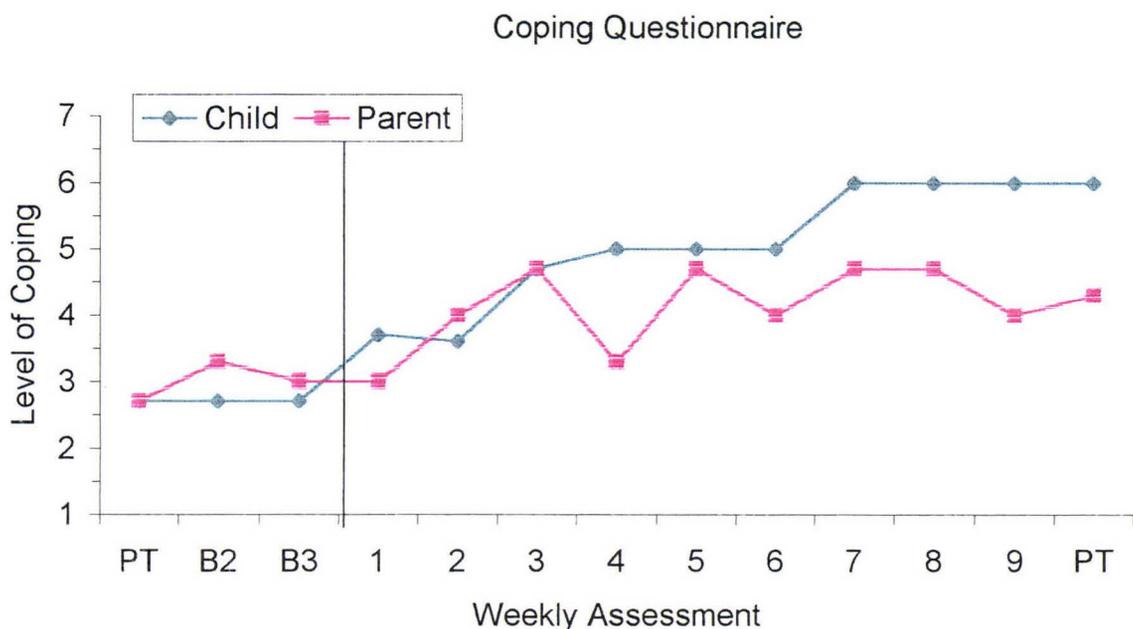


Figure 11. Changes in parent-reported and child-reported child coping skills [* average of scores for three target complaints across assessment and treatment sessions] for participant 3.

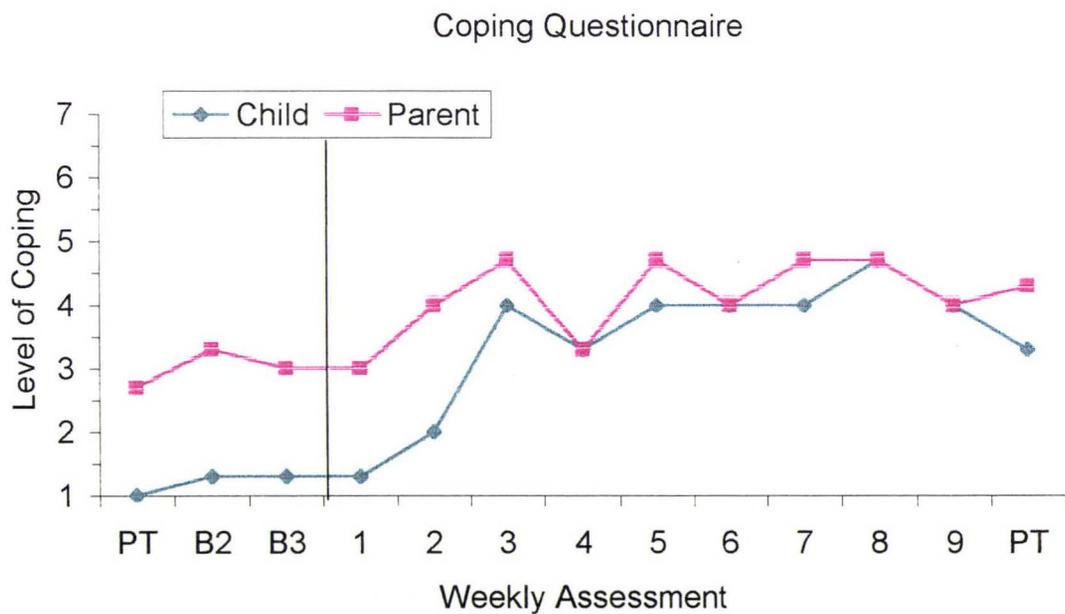


Figure 12. Changes in parent-reported and child-reported child coping skills [* average of scores for three target complaints across assessment and treatment sessions] for participant 4.

3.33 Parent Self-Report

It was proposed that parents' self-reports of internalising symptoms would improve following the intervention. The findings provide some mild support for this hypothesis. Results showed that there was a weak trend for parents' reports of anxious and depressive symptoms to decrease following treatment. The results of parents' self-reported internalising symptoms are presented in Table 4. Although scores for the two measures were within the normal range, there were slightly elevated levels of trait anxiety reported by three parents at pre-treatment. In all of these cases, scores dropped at post-treatment. In particular, results indicated a decrease in both anxious and depressive symptoms for the parent (mother) of participant 3. It is important to note that scores on outcome measures for participant 4 were from the child's father who completed the pre- and post-treatment assessments; however, he only attended two of the ten treatment sessions. The other participants had the same parent attending all the assessment and treatment sessions.

Table 4. Parent Self-Report Scores on Outcome Measures

Measure	Participant	Assessment Points	
		Pre-Treatment	Post-Treatment
BDI II (Total)	1	4	2
	2	0	0
	3	8	2
	4	6	11
STAI-T (T)	1	59	57
	2	40	41
	3	59	47
	4	58	52

Note. BDI II = Beck Depression Inventory II; STAI-T (T) = State Trait Anxiety Inventory (T-score).

3.34 Clinical Significance

Evaluation of treatment outcome needs to include an assessment of the clinical significance of change that occurred after treatment. Clinical significance refers to the meaningfulness of change. Consistent with Kendall and Grove (1988), clinically significant improvement in the present research was defined as change to within normal limits on measures for which normative information was provided. In the present study, clinically significant change was evaluated using the normative mean appropriate for each participant's age on the relevant measures.

On the parent CBCL Internalising scale, *T*-scores following treatment for the three participants whose initial *T*-scores were in the clinical range (≥ 64) were within normal limits. For participant 4, initial *T* scores on the RCMAS, STAIC-S, and STAIC-T were in the clinical range. Results after treatment showed clinically significant change on all three measures.

In addition, and most importantly, all four participants no longer met diagnostic criteria for anxiety disorders following treatment.

3.4 Follow-up

Owing to the timeframe for this research, follow-up assessments have not as yet been completed. However, follow-up assessments are planned for 3 and 12 months, respectively.

CHAPTER 4. DISCUSSION

4.0 SUMMARY OF THE FINDINGS

Taken together, the present results provide support for the effectiveness of a briefer version of a cognitive-behavioural intervention in the treatment of anxiety disorders in children. The results of the current study were consistent with prior studies (Barrett, Dadds, et al., 1996; Howard & Kendall, 1996) using various adaptations of Kendall and colleagues manualised programme for treating youth with anxiety disorders (Kendall et al., 1990). Multimethod assessment using diagnostic status, child-self-reports, and parent and teacher reports, indicated beneficial gains for all participants from pre- to post-treatment. Moreover, further support for the intervention was provided by the determination of clinically significant change for participants on some measures. Importantly, all children were diagnosis free following treatment. The results indicated that the intervention was successful in eliminating both primary and secondary diagnoses for the four participants. The use of a multiple baseline design reduced the likelihood that treatment effects were due solely to sources of internal invalidity such as history or maturation.

Results of the present study are similar to those reported by Kane and Kendall (1989), Kendall (1994), Kendall et al. (1997), and others (e.g., Barrett, Dadds, et al., 1996; Howard & Kendall, 1996). Child and parent report on several measures provided support for the beneficial effects of the programme across a range of functioning areas. Specifically, in the present study, improvement was shown on child reported anxiety, depressive symptoms, and self-statements related to negative affect for three of the four participants. In contrast, the fourth participant initially denied anxiety problems and reported more anxiety at post-treatment. Scores on depressive symptoms and self-statements related to negative affect were within the normal range at pre-treatment and remained unchanged at post-treatment. For this participant, the combination of no disorder at post-treatment combined with reduced denial of anxiety on self-report was encouraging.

Positive changes on parent reports of children's internalising and externalising symptoms also followed the intervention. In some cases, using normative comparisons, treatment returned participants to within the normal range of functioning. For example, the three participants who had CBCL internalising ratings in the clinical range at pre-treatment had scores reduced to under the clinical range at post-treatment. In addition, children's externalising behaviour problems, although within the normal range at pre-treatment, decreased somewhat following the intervention.

Where available, teacher reports in one case did not provide support for positive treatment effects. This participant had pre- and post-treatment results within the normal range. There was however, a substantial reduction in internalising behaviour problems reported by the classroom teacher for the other child following the intervention. Teacher reports on externalising behaviour problems for the two participants were initially low and remained unchanged from pre- to post-treatment. This pattern of findings is mirrored in other research (e.g., Kane & Kendall, 1989; Kendall, 1994). Due to treatment continuing after the end of the school year for two participants, the TRF was unable to be completed post-treatment for these children.

As predicted, parent and child ongoing reports of the child's anxiety symptoms and ability to cope with individualised anxiety-provoking situations remained relatively stable at baseline and improved during and following treatment. Specifically, as treatment progressed, parents and children tended to report substantial reductions in children's trait anxiety. Similarly, anxiety-related coping ability targeted during treatment also showed positive change as treatment progressed. Substantial improvements were reported from pre- to post-treatment by both children and parents.

Finally, the prediction that parents' self-reports of anxiety and depressive symptoms would improve following the intervention was mildly supported in the present study. Anxiety and depressive symptoms generally reported by the parents at the beginning of treatment were within the normal range of functioning; however, in a few instances parents scores were elevated. Results indicated a slight reduction in anxiety and depressive symptoms after the intervention for two of the three parents who attended all sessions of the programme.

4.1 INTERPRETATION AND IMPLICATIONS FOR THEORY, RESEARCH, AND PRACTICE

The findings of the present research add support to the growing body of literature indicating that cognitive-behavioural interventions are efficacious in treating children with anxiety diagnoses (e.g., Barrett, Dadds, et al., 1996; Kendall et al., 1997). Consistent with cognitive-behavioural theory, treatment in the present study specifically targeted erroneous cognitive processing and avoidance behaviours that anxious children engage in, along with a focus on the child's emotions and interpersonal relating. The cognitive-behavioural programme used in the study led to improvements across several domains of child functioning. Most notably, there were positive changes in children's cognitions, affect, and behaviour related to coping with anxious experiences. The positive gains achieved in the present study provide further support for conceptualising and treating anxiety problems based on a cognitive-behavioural model (Ronen, 1998).

This particular approach (Girling-Butcher & Ronan, 1999) included more parental involvement than the original programme (i.e., Kendall, Chansky, et al., 1992). It was evident that there were a number of positive "spill over" effects from this increased involvement. Parents were also able to learn the coping skills and strategies presented to the child in the programme. This allowed the parents to provide critical practice opportunities for their child in between sessions and to assist their child to develop a coping template to manage anxious situations. With the skills that the parents were learning, they were perhaps better able to support and coach their child to attempt a number of exposure-based tasks outside of the therapy sessions. This then appeared to facilitate more efficient treatment delivery involving fewer numbers of sessions compared with the United States (Kendall, Chansky, et al., 1992) and Australian programmes (e.g., Barrett, Dadds, et al., 1996). Finally, the involvement of parents in the programme may have benefits longer term, both for the child and the parents themselves.

That is, self-reports of anxiety and depressive symptoms reduced slightly following the intervention for two of the three parents who regularly attended the programme with their child. In contrast, Kendall et al. (1997) reported non-significant post-treatment differences in parents' levels of depression (BDI) and anxiety (STAI) between wait-list

and treatment groups in their study. Given that the parents in the Kendall et al. (1997) study were not actively involved in all treatment sessions, this finding is not particularly surprising. The results of the present study suggest that some gains may be produced by virtue of parents seeing and observing the coping strategies taught to their child and demonstrated to the parents in the programme. If future large scale studies found changes, it would be important to investigate what mechanisms may be responsible for such changes in parent reported symptoms. A more primary question is whether these changes are achievable with parents who initially report clinical levels of anxiety and depression. While the suspicion here based on the current results is that they are, future research will be the more appropriate arbiter.

Although depression was not a problem specifically targeted in treatment, child reports of depressive symptoms improved after the intervention and paralleled improvement in anxiety symptoms. Specifically, two of the four cases reported clinical levels of depressive symptoms at pre-treatment, and all participants reported depressive symptoms below a clinical level at post-treatment. Similar beneficial effects on children's self-reported depressive symptoms have been reported in previous studies using cognitive-behavioural therapy for anxiety disorders in children (Kendall, 1994; Kendall et al., 1997). A possible explanation for this effect may be that participants are generalising the coping skills that they are learning in the programme to other problem areas than those specifically targeted in treatment. Alternatively, given the close association between anxiety and depression, skills may be useful in reducing general distress (or negative affect; Watson & Clark, 1984).

Although there was a noticeable improvement on most measures after treatment, teacher reports did not show universally beneficial effects. It is important to note that children in the study were referred by their parents (see also Kendall et al. (1997)). In addition, both current experience and previous research indicate that anxious children are not always seen as being behaviour problems in the classroom (Kendall, 1994). As suggested by Kendall (1994), it is possible teacher reports of children's internalising behaviour problems may be less sensitive than teacher reports of externalising behaviour problems.

The possibility that teacher reports of children's internalising symptoms as measured by the CBCL may not be a sensitive measure of children's anxiety and depressive symptoms has important implications for both research and practice. Further investigation into the validity and usefulness of teacher assessment information such as the CBCL in relation to anxiety is critical. For example, are classroom teachers able to assess accurately children with elevated or clinical levels of anxiety? If they are, how best might teachers obtain this information? Furthermore, are there more appropriate measures of identifying anxious children in the classroom rather than using a behavioural checklist such as the CBCL?

The current study extends previous research in several ways. First, a briefer version of an already effective programme for treating anxiety disorders in children appears to be equally effective. In light of the findings reported by Weisz and Weiss (1989) that children attend fewer than 10 sessions before terminating or dropping out of therapy, the results of the present study have important implications for practice. In the current climate of managed care policies, ACC entitlements, and other cost related issues impinging on clinical practice, there is increasing pressure on practitioners to provide brief, empirically supported interventions. The present study provides preliminary support for the efficacy of brief therapy in treating multiple anxiety disorders in children as young as 8 years of age.

Second, the present research has successfully included active parent involvement in treatment while remaining essentially a child focused intervention. While the programme centred on teaching the child coping strategies for managing anxiety, it was important to include parents in the treatment sessions for a number of reasons. Therapy took place over a brief period of time (eight to ten sessions). Therefore to maximise treatment impact, parents needed to reinforce and coach the children to use the skills taught in the programme outside of the therapy sessions. In addition, parents play an ongoing significant role in their child's everyday life and development. Consequently, it was deemed important to involve them more fully in the treatment. This was designed to better ensure that treatment gains were generalised to the child's natural environment and maintained after treatment finished. However, as parent involvement is not specifically measured in the present study, it is not clear how much specific impact parental participation had on treatment outcome.

There was, however, some positive impact from parent involvement noted anecdotally during the intervention. Throughout the programme, the therapist observed a number of positive changes in parent and child interactions. Specifically, the way in which parents responded to their child's anxiety appeared to change over the course of the intervention. Parents appeared to develop more tolerance of their child's anxiety and no longer appeared as willing to support to their child's avoidant behaviours. Additionally, as the children began to manage anxious situations, parent's positive perceptions of their child's ability to cope and successfully deal with anxious experiences clearly increased and appeared to encourage further involvement. However, in the present study, no formal method of evaluating this involvement was undertaken. Therefore, it is not possible to make any conclusive comments based on these observations and the effect that these changes may have had on generalising treatment gains outside of therapy. However, future research here may be useful.

Third, the present study incorporated both the educational and graduated exposure components of treatment simultaneously in the programme. In contrast, previous studies using the manualised programme have presented the educational portion of the intervention first followed by graduated exposure in the second segment of the intervention (Howard & Kendall, 1996; Kendall et al., 1997). The results of the present study demonstrate that the education component of the programme does not exclusively need to precede graduated exposure in order to produce positive changes in children's ability to manage anxious situations. However, the study was not designed assess which specific aspects of the intervention were responsible for the success of the programme. Additional research investigating the effectiveness of the specific components of the programme needs to be undertaken to clarify this issue.

4.2 LIMITATIONS OF THE PRESENT STUDY

A number of limitations were evident in the present study. There were advantages and disadvantages in using a multiple-baseline across subjects' design. The design suggested that the intervention was effective in reducing maladaptive anxiety in children. However, due to time constraints, the present study used a relatively short baseline measurement (two children had a two week baseline and two children had a three week baseline). A major disadvantage of using a multiple baseline design is that it

is not known whether results from these cases can be generalised to other cases. In addition, using a multiple baseline design does not allow for the identification of specific strategies/components that are central to successful treatment outcome. Although observed effects can be associated with the intervention, it is difficult to unravel a multifaceted treatment programme designed to treat complex disorders such as anxiety (Howard & Kendall, 1996).

A further limitation of the present study was that it did not allow for the investigation of differential outcomes for a range of non-anxiety based diagnoses. As all four participants had comorbid anxiety disorders, the study did not permit an examination of treatment effects for children presenting with an anxiety disorder comorbid with another psychological disorder, which is commonly found in children with anxiety diagnoses (Anderson, 1994; Klein, 1994). The participants in the present study had a primary anxiety diagnosis at pre-treatment as well as secondary anxiety diagnoses. Both primary and secondary anxiety diagnoses were no longer present at post-treatment, suggesting that the intervention was useful in eliminating a range of anxiety disorders in children. However, research is required to examine the effects on other comorbid diagnoses. For example, Kendall (1994) found that children in their study who had comorbid disorders did not do as well in the 16 session programme as those children without comorbidity. Future studies need to investigate whether children with comorbid disorders would benefit more from the current integrated treatment package or from specialised interventions that target their various disorders.

It is also unclear whether the four children who received the intervention were representative of typical clinic referrals for therapy. Consequently, it was not established if the findings of the present study are likely to generalise to general practice settings. It has been reported that research based interventions can produce differential treatment outcomes than service-based interventions (Weisz, Weiss, & Donenberg, 1992). This may relate to client factors such as the way children are referred or client/therapist expectations, which may differ in research settings as apposed to “real world” settings. Children in the present study were recruited through newspaper advertising and were referred to the treatment programme by their parents. Expectations of the child and parent regarding participating in a specialised anxiety programme (based on an already effective intervention) may have created a greater expectancy of a

positive outcome. In addition, it is important to be aware that acceptance into the programme was based on whether the participants had a primary diagnosis of anxiety. In the present study, it is possible that a focused intervention for a narrow target group such as children with anxiety diagnoses, may have produced a homogeneous participant sample not necessarily reflective of the children generally seen at some clinics.

A major aspect of the present research related to the use of parents to facilitate and encourage coping behaviour in their children. Perhaps the greatest limitation of the present study was that the increased parent involvement in the study was not formally evaluated following the intervention. The exact mechanisms by which parents contributed to the progress that their child made during the programme is largely unknown. Furthermore, although there was an increase in exposure practice, workbook activities, and STIC tasks per session from the original programme (Kendall et al., 1990), there was no examination made of the effects of these increases in the present study. Additional research is needed formally evaluating the increased activities and the various issues related to parent involvement.

Another limitation may have been a failure to include a behavioural observation measure in the study. It would have been useful to collect observational data independently during both the assessment and treatment phases of the research. Direct observations can produce reliable data not influenced by problems such as poor recall or social desirability (Strauss, 1993). Observer rating scales can record the following types of anxious behaviours: trembling hands, quivering voice, flushed cheeks, crying, verbal complaints, and nervous movement (unable to keep still) often exhibited by anxious children. Furthermore, direct observation of avoidance behaviours can assist in treatment planning, setting goals, and monitoring progress throughout the intervention. In addition, direct observations allow for the measurement of antecedents and consequences of anxious behaviour. Visible reductions in anxious behaviours obtained by an independent assessors(s), along with positive change reported by parents and teachers, can help to provide confidence regarding the effectiveness of treatment outcomes.

A potential limitation in the present study related to the length of the individual therapy sessions in the programme. The standard therapy hour usually runs for 50-60 minutes.

In the present study, sessions ran for approximately 75 minutes. This timeframe, like the Barrett, Dadds, et al. (1996) study, allowed the therapist to meet with both the parent(s) and the child. In addition, part of each session involved both the child and the parents working with the therapist together. This allowed the child to demonstrate their newly learned skills to their parents. Furthermore, these slightly longer session times meant that some of the exposure practices were able to be carried out at the clinic with the support of both the therapist and the parent. However, transporting this research based programme to service clinics may be problematic given a duration of slightly over one hour for sessions in the current study. In terms of a time commitment, the current programme could possibly extend over 10 one hour sessions. However, future research needs to document the effectiveness of such an approach. Additionally, it is common practice in child and family practices (e.g., local Child and Family Service; Massey Psychology Clinic) for sessions involving both parents and children to run routinely for more than one hour (75 to 90 minutes, C. Wooley, personal communication, March 22, 2000). Thus, this specific programme appears to be directly transportable to at least some outpatient settings.

4.3 RECOMMENDATIONS FOR FUTURE RESEARCH

As noted in previous research on child anxiety (Kendall, 1994; Kendall et al., 1997), the present study was unable to determine which treatment components were active in bringing about change. Treatment components in the present intervention included relaxation, modelling, exposure, cognitive restructuring, problem solving, and contingency management. The relative contribution of each of these techniques to the apparent effectiveness of the programme, is unclear. Several questions remain unanswered. For example, are some elements in the programme more “active” in bringing about change than other elements? Furthermore, are the positive effects reported in the present study due to largely behavioural strategies, cognitive components, or a combination of both? For example, is changing anxious self-talk into coping self-talk more critical than relaxation or in vivo exposure? Further investigations need to examine which treatment strategies in the programme are critical components of therapeutic change.

It may be advisable for future studies to examine whether including parents directly in this anxiety programme is necessary for enhancing treatment effectiveness. This would involve implementing controlled treatment studies that would directly manipulate varying levels of parental involvement while keeping the skills and treatment strategies of the programme the same. If it is established that active parent involvement is related to positive outcome, research can then investigate which specific parent components increase effectiveness. For example, is it the coping skills taught to the child and demonstrated to the parents that enhances treatment outcome? Or is it direct parent involvement in the in vivo exposure activities that is critical to parents being able to support their child's newly acquired coping behaviours?

The role of family interactions, parenting styles and parental psychopathology are only just beginning to be addressed in research. It is hoped that further study of parental characteristics such as psychosocial adjustment and family communication styles will be carried out. This would include observing general parent and child interactions as well as observing how the parent(s) and child handle conflict and specifically anxious situations. This may lead to a more comprehensive understanding of the role that parents can play in the maintenance or exacerbation of their child's anxiety problems that would then have direct treatment implications.

The three parts that made up the 75-minute therapy sessions were considered critical to the successful outcome of the programme. The original 16-20 session programme (Kendall, 1994; Kendall et al., 1997) was successful employing 50-60 minute sessions. However as in the current study, other family based studies in this area used longer session duration (e.g., Barrett, Dadds, et al., 1996). Future research needs to investigate the optimum duration needed for each session to meet both the requirements of effective treatment and to take into account issues of cost and time effectiveness.

There are a number of issues related to the importance of homework and in session workbook activities in the present study which require further exploration. Due to a reduced number of sessions in the present study compared to the original programme, an increased number of homework activities (STIC tasks) were set. Children also completed workbook activities in the sessions. The STIC tasks and in session workbook activities reinforced the skills that the child and parents were learning in therapy while

also providing concrete examples of anxious experiences relevant to each child's specific concerns. In addition, it is important to note that the STIC tasks included a reasonable amount of exposure practice that the child and parents carried out in between therapy sessions. Parents of the children in the current study were willing and able to do this. Moreover, concrete and social rewards were provided after every two sessions for completed STIC tasks to assist the children to remain motivated and to reinforce them for attempting to face their fears. It would be useful to investigate further the role that homework and the workbook activities played in the success of the programme.

Future research needs to address the issue of transporting manual-based treatments from research clinics to service clinics. Bridging the gap between research and practice requires studying the similarities and differences between research-based interventions and service-based treatments. For example, in research settings the use of focused and monitored treatment (e.g., treatment manuals, audio taping sessions in order to rate treatment integrity) may affect treatment outcome. As also noted by Kendall and Southam-Gerow (1995) the role of close and focused supervision and pre-post- and follow-up assessments needs to be investigated in future studies. In addition, further investigation into client and therapist factors involved in research-based and service-based treatments is required to close the gap between research-based interventions and "real world" practice. This programme does appear to have potential in these real world settings that merits investigation.

Recently, there have been researchers looking at programmes that target prevention and early intervention for child anxiety problems (Dadds et al., 1997). Most of the current research in the area of child anxiety has focused on older children or adolescents. Results of the present study showed preliminary effectiveness of an anxiety programme with two eight year-old children. Early intervention and prevention programmes targeted at primary school age children may be beneficial in reducing major anxiety concerns before they become too pervasive. However, more research in this area is needed.

As previously noted, future studies need to focus on issues of generalisability of the current findings to other groups. For example, there is a need for researchers to address the issue of whether programmes such as the present intervention are suitable or

effective for children from ethnic minorities. Culturally relevant considerations need to include the examination of whether parents from cultural minorities view this type of treatment at clinic settings as being appropriate for their culture. Cognitive-behavioural therapy for anxiety in children needs to incorporate culturally sensitive assessment and treatment procedures delivered in a culturally competent and sensitive manner. Consideration of cultural differences in definitions of fear-provoking objects or events, modes of coping, and parent management style/skills are particularly important.

4.4 CONCLUSION

In conclusion, anxiety disorders in childhood appear to have a chronic course, and are pervasive across a variety of settings and domains of functioning. Current research tends to support the view that cognitive-behavioural theory is useful in conceptualising anxiety problems in children. Assessment of anxiety disorders needs to incorporate information from a range of sources, covering home and school environments. A wide range of assessment measures, such as behaviour rating scales and direct observations, child self-report, parent report, as well as parent and child structured interviews need to be used to gain a clear understanding of the child's presenting difficulties.

Multiple treatment strategies are advocated that tailor therapy to the specific needs of the child and their family. Although preliminary, the present study is informative, as it demonstrated the effectiveness of implementing a brief cognitive-behavioural programme for the treatment of anxiety disorders in children. Randomised controlled studies are now needed to determine if the programme is effective with a larger and more diverse group of children and which components in the multifaceted program are most critical in producing meaningful change.

One of the strengths of the present intervention relates to the effectiveness of changing dysfunctional behaviours in a relatively short time. Training parents in contingency management strategies and appropriate modelling behaviours can help to ensure the likelihood that the cognitive-behavioural work conducted with the child in therapy will be reinforced and maintained in the family environment (Barrett, Dadds, et al., 1996). Parental involvement in therapy is important in terms of being able to generalise treatment gains once therapy stops. For this and other reasons, it is essential that long-

term follow-up of the treatment gains reported at post-treatment be carried out with the four participants in the present study to examine this potential. These follow-up assessments are planned at 3 month and 12 month intervals.

Many critical issues concerning anxiety disorders in children remain unresolved. For example, identifying the components that are necessary and effective in producing long term change, the issue of comorbidity, and the precise role of parents and family processes in the development and exacerbation of anxiety problems in children are all areas that need further examination. In addition, the value of early intervention programmes, and the possible differential effects of anxiety programmes in relation to age, developmental level, and gender requires further investigation. In relation to the current findings, the challenge for researchers and practitioners is whether brief therapy can effectively address the pragmatic and cost related issues of clinical practice while meeting the needs of anxious children and their families. Based on the results of the present study, the possibility of achieving this goal looks promising.

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Appendix A. Information sheet for parents/guardians

(Massey Letterhead)

BRIEF TREATMENT FOR CHILDHOOD ANXIETY

INFORMATION SHEET

This research is being carried out by Robyn Girling-Butcher, under the supervision of Dr Kevin Ronan, as part of her MA degree in Psychology at Massey University. Robyn is presently in the final stages of training to become a clinical psychologist.

What is this research about?

The research is about helping children and young adolescents deal effectively with anxiety problems. A free 8-session treatment programme, designed to help children and adolescents cope with their anxiety, is being offered to youth experiencing anxiety at a clinical level of severity. This treatment is based on a 16-session treatment programme, that has been demonstrated to be successful, in a number of studies.

What would you need to do?

If you agree for your child and yourselves (as parents/guardians) to take part in the research:

- Two 1 hour assessments would need to take place, to see whether your child meets the inclusion criteria of the study. Further assessment will be conducted during treatment, and directly after treatment, to monitor how treatment is going, and 2 months after completing treatment.
- Treatment will involve the child attending eight sessions once a week, for approximately 70 minutes each time. Parents/guardians will be asked to attend a part of each session (30 minutes), to help reinforce the strategies that are being taught to the child.
- Treatment will take place at the Massey Psychology Clinic at no cost to you.

- Assessment and treatment will be audio- and or video taped, if prior consent is given.
- Your participation in this study is voluntary, and if you agree to take part in the study, you and your child will be asked to sign a consent form.

What can you expect from the researcher?

If you and your child choose to take part in this study you have the right to:

- Contact the researcher at any time to discuss any aspect of the study.
- Choose not to participate or withdraw from the study at any time and continue to receive treatment services.
- Refuse to answer any questions at any time and continue to receive treatment services.
- Decline to have assessment or treatment sessions audio-or video taped, even if prior consent has been given.
- Know that all information is provided on the understanding that it is completely confidential to the researcher. All records are identified by code number, are seen only by those directly involved in the study (the researcher, her supervisor, and a trained assessor completing the assessments), and are to be used only for the purposes of the research. It will not be possible to identify individuals in any reports of the results. If your child withdraws from the study at any time but wishes to continue receiving treatment, all information collected for treatment purposes after withdrawal, will be excluded from the research.
- Have access to a summary of the findings when the study is concluded.

If you are interested in you and your child taking part in the research and would like me to contact you, to answer any questions or arrange a meeting, you can contact me by leaving a message for Robyn Girling-Butcher at the School of Psychology office, Massey University on (06) 3504118 , or you can contact my supervisor Dr Kevin Ronan on (06) 3504145.

Appendix B. Information sheet for children (to be attached to the parent/guardian information sheets).

(Massey Letterhead)

BRIEF TREATMENT FOR CHILDHOOD ANXIETY

CHILD INFORMATION SHEET

Massey University is doing a study with children who have anxiety. The children taking part in the study are likely to worry about things, have nervous feelings, and may be afraid of things or places. The people carrying out the study are Robyn Girling-Butcher and Dr Kevin Ronan.

What is the study about?

The study is about helping children cope with worry or nervous feelings, through doing a special programme for 8 weeks. The programme has helped many other children deal with the same kinds of problems.

What would you need to do?

If you choose to do the programme we would need to decide how best to help you. This would mean asking you and someone who looks after you some questions. Once you have done that, you may be able to start the programme.

- Doing the programme would mean you would come and see us at the Massey Psychology Clinic for approximately 70 minutes, once a week for eight weeks.
- After you have finished the programme, we would want to see you again two times, to see how you are doing.

The programme sessions will be audiotaped and some may be videotaped, if you have agreed to this.

Things you can ask or do in our study:

If you decide to do the study you can:

- talk about any part of the study or ask any questions about the study at any time
- choose not to do the study, or stop doing the study at any time
- say you do not want to answer any questions
- say no, if you do not want us to record the sessions, even if you said yes earlier

The information you give us is confidential or private. We (the researchers) will not tell anyone else anything you tell us, except for the people helping us do the study.

Appendix C. Parent/guardian consent form

(Massey letterhead)

BRIEF TREATMENT FOR CHILDHOOD ANXIETY

CONSENT FORM

I have read the information sheet and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I know that I can ask further questions at any time.

I also understand that I have the right to withdraw from the study at any time and the right to refuse to answer any particular questions in the study and my child will continue to receive free treatment.

Parental consent is essential for children to participate within this study. In agreeing to participate, I also provide consent for my child's participation.

(Children aged eight years and younger do not need to sign a consent form if parental consent is given).

I agree to provide information to the researchers on the understanding that it is completely confidential and that my name and my child's name will not be used without my permission. *(The information will be used only for this research and publication arising from this research project).*

I agree/do not agree to the researcher contacting my child's teacher for information on how my child is functioning at school.

I agree/do not agree to the interviews and sessions being audio taped.

I agree/do not agree to the interviews and sessions being video taped.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interviews or during the treatment sessions.

I also understand that I have the right to ask for the video tape to be turned off at any time during the interviews or during the treatment sessions.

I agree to participate in this study under these conditions and those set out in the information sheet.

Signed:

Name:

Signed:

Name:

Date:

Appendix D. Child consent form

(Massey letterhead)

BRIEF TREATMENT FOR CHILDHOOD ANXIETY

CHILD CONSENT FORM

I have read, or someone has read to me this form. I have had the study explained to me. My questions about the study have been answered, and I know that I can ask more questions at any time.

I know that I can stop taking part in the study at any time. I can also refuse to answer any questions.

I agree to give information to the researchers on the understanding that it is completely confidential, meaning that it is private.

I agree to the interview being audio taped.....**Yes No**

I agree to the interview being video taped.....**Yes No**

I understand that I can ask that the audio tape be turned off at any time.

I also understand that I can ask that the video tape be turned off at any time.

I agree to take part in this study under these conditions.

Signed:

Name:

Date: