
RESEARCH PROJECTS 1, 2, 3 AND 4

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PARENT TRAINING FOR CHILDREN WITH DSM-IV ATTENTION-
DEFICIT/HYPERACTIVITY DISORDER: A CASE STUDY

Research Project 1

Abstract

A wide body of evidence supports the use of parent training (PT) programs among children with non-compliant and oppositional behaviour. Few investigations, however, have employed PT programs in the treatment of DSM-IV AD/HD symptoms. The current study aimed to investigate the effectiveness of Barkley's (1987) PT approach in the treatment of a five year old boy with DSM-IV AD/HD Combined Type and non-compliant behaviour. Barkley's 10 step program was implemented with the subject's mother. One month follow up data was obtained. Results indicated that oppositional behaviour, problems situations at home, and severity of non-compliance at home reduced following treatment. Further reductions were apparent at follow up. Results also indicated that DSM-IV AD/HD inattention and hyperactive/impulsive symptoms reduced significantly following treatment, with further reductions noted at follow up. DSM-IV Inattention symptoms in particular reduced significantly, with no symptoms present at follow up. These findings support the use of Barkley's PT approach in the treatment of non-compliant behaviour as well as AD/HD inattention and hyperactive/impulsive symptoms. Implications for the assessment and treatment of AD/HD and non-compliance are discussed. It is noted that the generalisability of the results is limited given the use of a single case study design. Future research investigating the effectiveness of Barkley's PT approach among a larger sample of male and female children with AD/HD is warranted.

Parent Training for Children with Attention-Deficit

Hyperactivity Disorder

Parent training (PT) interventions have recently been employed in the treatment of Attention-Deficit Hyperactivity Disorder (AD/HD; American Psychiatric Association, 1994). However, few studies have used the approach developed by Barkley (1987). This essay shall provide an overview of AD/HD. Particular attention will be paid to issues that are relevant to PT interventions with AD/HD children. Theoretical and clinical arguments for the use of PT, particularly Barkley's approach, with AD/HD children will be discussed. A review of the limited research examining the effectiveness of parent training interventions in the treatment of this disorder will follow. A case study supporting the effectiveness of PT in the treatment of children with AD/HD is also presented.

Overview of AD/HD

AD/HD is characterised by age-inappropriate symptoms of inattention, hyperactivity and impulsivity, resulting in maladaptive functioning across two or more settings (American Psychiatric Association, 1994). Symptoms of inattention include being easily distracted, having difficulty sustaining attention in tasks or play activities, failing to follow through on instructions, and having difficulty engaging in activities that require sustained mental attention. Hyperactivity encompasses behaviour such as leaving one's seat when seating expected, fidgeting with hands or feet or squirming in seat, inappropriately running about or climbing excessively, talking excessively, and acting as though driven by a motor (American Psychiatric Association, 1994). Impulsivity, commonly regarded as acting before thinking, includes blurting out answers before

questions have been completed, experiencing difficulty waiting turn, and interrupting others (American Psychiatric Association, 1994).

Diagnostic Criteria

The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) lists 18 symptoms spanning the dimensions of inattention (nine symptoms), hyperactivity (six symptoms) and impulsivity (three symptoms). For diagnostic purposes, symptoms are classified in terms of two groups: inattention symptoms and hyperactivity/impulsivity symptoms. Three subtypes of the disorder are recognised. These include “Predominantly Inattentive Type” (at least six of nine inattention symptoms), “Predominantly Hyperactive-Impulsive Type” (at least six of nine hyperactive/impulsive symptoms) and “Combined Type” (at least six inattention symptoms and six of nine hyperactive/impulsive symptoms). Diagnosis requires the onset of symptoms prior to age seven with the display of such symptoms for a minimum of six months across two or more settings. Clinically significant impairment in social, academic or occupational functioning must also be produced.

Associated Symptomatology

Children with AD/HD have been reported to experience a range of co-morbid conditions. More specifically, a consistent body of research has found that maladaptive levels of inattention are associated with pathological internalising behaviours (Halperin et al., 1990; King & Young, 1982; Lahey, Shaugency, Strauss, & Frame, 1984; Lahey et al., 1987) and academic difficulties (Barkley, Du Paul, & McMurray, 1990; Baumgaertel, Wolraich, & Dietrich, 1995; Edlebrock, Costello, & Kessler, 1984; Gaub & Carlson, 1997). For instance, Lahey et al. (1987) found that 43% of children with a primary inattention deficit received a co-diagnosis of either an anxiety or depressive disorder.

In contrast, hyperactivity and impulsivity have been associated with externalising behaviours such as conduct problems and oppositional behaviour (Barkley, Du Paul, & Mc Murray, 1990; Berry, Shaywitz & Shaywitz, 1985; Edelbrock et al., 1984; Eiraldi, Power, & Nezu, 1996; Loney & Milich, 1982; Morgan, Hynd, Riccio, & Hall, 1996). Hyperactivity is also more commonly associated with peer related difficulties such as peer rejection (Barkely et al., 1990; Cunningham & Siegel, 1987; Gaub & Carlson, 1997; Lahey et al., 1994) and deficiencies in establishing friendships (Grenell, Glass, & Katz, 1987).

Prevalence

AD/HD is one of the most common childhood disorders. AD/HD is more common in males than females. DSM-IV reports a male to female ratio of 4:1 to 9:1 (American Psychiatric Association, 1994). According to DSM-IV, the overall prevalence rate for AD/HD is 3% to 5% in children (American Psychiatric Association, 1994). Population studies, however, have produced prevalence rates up to 17.8 % (Baumgaertel et al., 1995).

Etiology of ADHD

Several theories regarding the development of AD/HD have been espoused. Among the most influential include biological, psychological and psychosocial conceptualisations, each of which shall be discussed below.

Biological Theories

Several researchers have implicated the role of neurochemical imbalances in the etiology of AD/HD. These have included abnormalities in one or more of the monoaminergic systems, involving either dopamine or norepinephrine mechanisms (Anastopoulos, 1998). The pre-frontal limbic areas in particular have been identified as the locus of this dysfunction (Lou, Henriksen, Bruhn, Borner, & Nielsen, 1989). For

instance, decreased blood flow, glucose utilisation and EEG activation have been reported in the frontal lobes of children with AD/HD (Wicks-Nelson & Israel, 1997). For many children, such neurological circumstances result from factors such as genetic transmission, and pregnancy and birth complications (Bierderman et al., 1987; Edelbrock, 1995). For some children, AD/HD may be acquired after birth, as a result of head injury neurological illness and other biological complications (Ross & Ross, 1982).

Psychological Theories

Early psychological theories implicated deficiencies in executive functioning as the core of AD/HD difficulties. These theories included perspectives emphasising deficiencies in the regulation of behaviour in response to situational demands (Routh, 1978), in self directed instruction (Kendall & Braswell, 1985) and in rule governed behaviour (Barkley, 1981). More recent theories have adopted a neuropsychological approach. For instance, Quay (1989) has proposed that AD/HD is the result of impairment in a neurologically based behavioural inhibition system. In a given situation, children with AD/HD continue to respond despite cues to inhibit or change a current course of action. Indeed considerable research supports this notion. Behavioural investigations have consistently found children with AD/HD to perform poorly in situations where they must inhibit or change a current course of action (Iaboni, Douglas, & Baker, 1995; Oosterlaan & Sergeant, 1996; Oosterlaan & Sergeant, 1998; Schachar & Logan, 1990; Schachar, Tannock, Marriot, & Logan, 1995). Elaborating upon this model, Barkley (1997) has proposed that a deficit in behavioural inhibition is central to the understanding of the cognitive, behavioural and social deficits observed within children with AD/HD.

Psychosocial Conceptualisations

Psychosocial factors have not been considered critical in the etiology of AD/HD. However, these factors may provide a context within which the disorder develops. The majority of research has focused on familial factors such as stress, marital discord, and parent-child interactions. For instance, Goodman and Stevenson's (1989) study of twins reported a relationship between AD/HD behaviours and adverse family variables such as marital discord, parental malaise and criticism of the child (Wicks-Nelson & Israel, 1997). Other research has also reported a link between AD/HD and family adversity such as family dysfunction, and single parenting (Wicks-Nelson & Israel, 1997). Investigations of hyperactive children indicate that mothers of AD/HD children are less consistent, more impatient and power assertive than mothers of non-AD/HD children (Wicks-Nelson & Israel, 1997). Families with adolescent AD/HD children report greater conflict and more negative interactions than families without such children (Barkley, Anastopoulos, 1998 et al., 1992). The direction of causality, however, between family factors and the etiology of AD/HD is unclear.

Taken together, the findings regarding the etiology of the disorder indicate that AD/HD is most likely caused by a number of different factors. Biological etiology is currently believed to be central to AD/HD, however, psychosocial variables may be involved in the shaping and maintenance of the behaviours over time.

Assessment of AD/HD

Comprehensive and multimethod evaluations of AD/HD are required to capture its situational variability, co-morbid features and impact on home, school, and social functioning (Barkley, 1990). Such an approach often includes parent and child interviews, standardised behaviour rating scales from parents, teachers and children, direct

behavioural observations of AD/HD symptomatology and clinic-based psychological tests (Anastopolous, 1998).

Treatment of AD/HD

Stimulant medication is the most common form of treatment for the management of AD/HD (Barkley, 1990). The most frequently employed stimulants include methylphenidate (Ritalin), dextroamphetamine (Dexedrine) and pemoline (Cylert). Research reports that approximately 70% of medicated children show increased attention and reduced impulsivity and activity level (Wicks-Nelson & Israel, 1997). It is noted, however, that 10-20% of children do not respond to stimulant medication (Taylor, 1986). In the event that a favourable response is obtained, side effects often preclude the continued use of medication. Many parents also prefer not to employ a pharmacological treatment approach. To this extent, alternative treatment approaches must be considered.

An alternative empirically supported therapy for AD/HD is that of parent training (PT). This method is a form of behaviour modification emphasising the importance of consequences of behaviour, which has been widely used in the treatment of non-compliant behaviour in particular. Reinforcement is employed to control non-compliant behaviour. Both positive (e.g., praise) and negative (e.g., time out) reinforcers are used. In general, PT involves no intervention of the therapist with the child. Treatment sessions cover a range of social learning principals such as the use of differential attention, effective commands, praise, tangible rewards or tokens for desired behaviour, use of mild punishment, and contingency contracting. Homework assignments promote generalisation of the skills from the clinic to home setting. Progress is monitored weekly and modifications are made where necessary (Anastopolous, 1998).

PT interventions have been widely used in the treatment of childhood behaviour problems such as oppositional defiant disorder and conduct disorder. The success of this

approach in the treatment of non-compliant (Forehand, Griest, & Wells, 1979; Forehand & King, 1977; Forehand & McMahon, 1981; Peed, Roberts, & Forehand, 1977), and conduct disordered children (Patterson, 1982), is well documented. For instance, a meta-analysis of 26 controlled studies on the outcome of behavioural parent training to modify child antisocial behaviour supported the short term effectiveness of the approach (Serketich & Dumas, 1996). Significant reductions in child antisocial behaviour were reported at home and at school. Parental personal adjustment was also improved. However, whether positive changes as a function of PT are maintained over time was unable to be determined due to the limited number of studies collecting follow up data. Similar to this study, most reviews have found that PT may be of limited effectiveness with families characterised by adverse sociodemographic characteristics (Anastopolous, 1998).

For instance, several studies have found that families of low socio-economic status, and families in which mothers lack social support tend to make limited treatment gains or fail to maintain gains at follow up (Dumas, 1984; Dumas & Wahler, 1983; Wahler, 1980). These families have also been found to terminate treatment early (McMahon, Forehand, Griest, & Wells, 1980). Families in which mothers are single parents (Patterson, 1974; Strain, Young, & Horowitz, 1981; Webster-Stratton & Hammond, 1990), suffer from depressive symptoms (Griest, Forehand, & Wells, 1981) or experience marital discord (Resisinger, Frangia, & Hoffman, 1976) have also been found to terminate treatment prematurely.

Nevertheless, much research strongly supports the use of PT in the treatment of non-compliance and conduct behaviours (Anastopolous, 1998). The use of PT interventions in the treatment of AD/HD has been advocated on several grounds, particularly in light of the limitations of stimulant medication in the treatment of children

with this disorder. For instance, as previously discussed, not all children with AD/HD respond to stimulant medication. Further, for children whom stimulant medication is successful, significant periods of time are often spent non-medicated, such as after school, weekends and holidays. Moreover, the effectiveness of stimulant medication in the treatment of co-morbid conditions such as oppositional, aggressive and conduct disordered behaviour is particularly limited (Anastopolous, 1998). Theoretical justifications for the use of PT interventions in the treatment of children with AD/HD have also been offered. For example, according to Quay (1989) and Barkley (1997), AD/HD may be viewed as a condition characterised by neurologically-based deficits in behavioural inhibition. To this extent, children with AD/HD may have difficulty thinking through the consequences of their actions. Interventions which increase a child's awareness of the connection between their behaviour and its consequences therefore, such as PT approaches, may be particularly useful in the treatment of this disorder. Additional theoretical justification for the use of PT in the treatment of AD/HD is provided by research findings implicating the possibility of a developmental pathway leading from AD/HD to the commonly cited co-morbid conditions of Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD; Lahey, Loeber, Quay, Frick, & Grimm, 1992). If the presence of AD/HD is a risk factor for the development of ODD or CD, treatment of AD/HD to prevent the onset of these conditions is clinically important. As discussed, PT has been shown to work effectively with non-compliant and conduct-disordered children. The approaches advocated by Forehand and McMahon (1981) and Barkley (1987) have dominated this literature.

Parent training is an empirically supported therapy in the treatment of AD/HD. Whilst Barkley's approach has mostly been employed in the treatment of oppositional behaviour and conduct problems, studies have also investigated the effectiveness of this

model in the treatment of core AD/HD symptoms. In general, these studies have reported positive findings (Anastopoulos, 1998; Anastopoulos, Shelton, DuPaul, & Guevremont, 1993; Erhardt & Baker, 1990; Pisterman, Firestone, McGrath, & Goodman, 1992; Pisterman, McGrath, Firestone & Goodman, 1989. For example, Anastopoulos, Shelton, DuPaul and Guevremont (1993) investigated the effectiveness of parent training on non-compliant and core AD/HD symptomatology among AD/HD children. Parents of 34 school age children meeting diagnosis for DSM-III-R Attention-Deficit Hyperactivity Disorder participated in nine weekly PT sessions developed by Barkley (1987, 1990). The program included parent counselling and behavioural targeting not only non-compliant behaviour, but primary AD/HD symptomatology also. Results indicated that in comparison with wait list controls, subjects receiving PT displayed significant changes in a range of areas following treatment. PT parents reported improvements in the overall severity of their child's AD/HD symptomatology and the number of situations in which non-compliance presented problems at home. Improvements in parent functioning, such as enhanced parenting self-esteem, were also noted. These changes remained stable after two months of no therapeutic contact.

In light of the empirical support for PT in the treatment of AD/HD, the current study aims to evaluate the effectiveness of Barkley's PT approach in the treatment of a child with DSM-IV AD/HD symptomatology and associated non-compliant behaviour. An individual 10 step PT program (Barkley, 1987, 1990) was employed to treat a clinically diagnosed child with DSM-IV AD/HD and severe non-compliant behaviour.

On the basis of research indicating the effectiveness of Barkley's PT approach in the treatment of oppositional behaviour (e.g., Forehand et al., 1979; Forehand & King, 1977; Forehand & McMahon, 1981), it was hypothesised that *non-compliance (as measured by*

the DSM-IV ODD Rating Scale) would decrease reduce following the treatment program, and remain stable at one month follow up. It was also hypothesised that the number and severity of problematic situations at home (as measured by the Home Situations Questionnaire), would decrease following the treatment program and remain stable at follow up.

Whilst Barkley's approach was originally developed to target non-compliant behavior, this approach has been applied to the treatment of AD/HD symptomatology. On the basis of these positive findings (Anastopolus et al., 1993; Pisterman et al., 1989), it was also hypothesised that *DSM-IV AD/HD Inattention and Hyperactivity/Impulsivity symptoms would decrease following the ten step PT program and remain constant at one month follow up.*

Method

Participant

The following case was referred to the Melton AD/HD Psychology Clinic, University of Ballarat. Located in Melbourne, Australia, the clinic specialises in the assessment and treatment of childhood disruptive behaviour disorders. The clinic is staffed by University of Ballarat Doctor of Psychology students, who are supervised by a Clinical Child Psychologist from the University of Ballarat. A University of Ballarat doctoral student, on clinical placement at the clinic, conducted assessment and treatment of a 5-year-old boy under the supervision of a Clinical Child Psychologist (see below for details of assessment and treatment).

Reason for Referral

The participant was referred by his mother to the University of Ballarat Attention-Deficit Hyperactivity Disorder (ADHD) Psychology Clinic for evaluation of home and school related behaviour problems. Of particular concern to his mother, and teacher at the time of referral was his difficulty finishing assigned tasks, extreme restlessness and frequent interruption of others.

Background Information

The participant was a 5-year-old boy in Grade Prep at Diamond Valley Primary School. The youngest of four children, he had two older brothers (24 years and 9 years) and an older sister (8 years). All children lived together with their mother. The subject had irregular contact with his father. The participant's 9 year old brother was diagnosed with ADHD four years ago and receiving medication (Dextroamphetamine) since this time.

The subject's mother reported no unusual factors relating to the pregnancy. As an

infant, he experienced asthma, suffered from a turned eye for which he continues to require glasses and has a hollow knee cap, for which future physiotherapy will be required. All developmental milestones were reached at age appropriate times.

According to his mother, the participant has always been an “active” child. From a young age, he was inattentive, ‘unsettled’, and non-compliant. Within the last few months, he had become increasingly inattentive, hyperactive at home and school. He was unable to sit still for any length of time, displayed frequent temper tantrums, refused to comply with commands, broke objects within the household, and was cruel to animals, such as his cat. The participant’s teacher reported that for the last few months, the participant had been disinterested in learning, unable to function adequately within a group, had a very short attention span, and was aggressive toward his peers. His academic achievement in all areas was reportedly below grade level.

Assessment

Several psychological assessment measures were completed by The participant’s mother and teacher to investigate the nature and severity of his behavioural problems. The subject’s mother completed the DSM-IV AD/HD Rating Scale for AD/HD and ODD, the Child Behaviour Checklist, the Conners’ Parent Rating Scale. A clinical interview (the Anxiety Disorders Interview Schedule- Parent Version; Silverman & Albano, 1996) was also conducted with his mother.

The subject’s teacher completed the DSM-IV AD/HD Rating Scale for AD/HD and ODD, the Child Behaviour Checklist -Teacher Report Form, and the Conners’ Teacher Rating scale. Laboratory measures conducted with the participant included the WPPSI – R (Wechsler, 1989), the Matching Familiar Figures Test and a test of sustained attention.

Results indicated that the participant met diagnostic criteria for AD/HD Combined Type, and Oppositional Defiant Disorder. The participant was rated by his mother and teacher as experiencing all 9 inattention symptoms on the DSM-IV AD/HD Checklist. His mother reported 8 of 9 hyperactive/impulsive symptoms and his teacher endorsed the presence of all 9 symptoms on the DSM-IV AD/HD Checklist. On the DSM-IV ODD Checklist, the subject's mother and teacher reported 6 of 8 symptoms. He was also found to experience significant social and conduct problems. On the Child Behaviour Checklist, The subject's mother reported significant attention problems, delinquent behaviour, aggressive behaviour, social problems and anxiety/depression. Similarly, his teacher reported significant attention problems, aggressive behaviour, delinquent behaviour, and social problems on the Teacher Report Format of the Child Behaviour Checklist. On the Conners' Rating Scales, his mother and teacher reported significant oppositional behaviour, cognitive problems, hyperactivity, social problems and psychosomatic problems.

On the Home Situations Questionnaire, the subject's mother indicated that he displayed extreme non-compliance across many (12 of 16) situations (e.g., when visitors are in the home, in public places, playing alone at meal times). Similarly, his teacher reported moderate non-compliance across many (10 of 12) situations at school (e.g., at lunch, during deskwork, during small group activities).

On the Matching Familiar Figures Test, the subject responded very quickly and inaccurately to tasks, indicating poor inhibitory control. A cancellation task indicated that his level of inattention and distractibility were comparable with AD/HD children. On the WPPSI-R, he received a Verbal Scale IQ of 116 (84th Percentile), a Performance Scale IQ of 101 (50th Percentile) and a Full Scale IQ of 107 (63rd Percentile). The subject's Full Scale IQ falls within the Average range.

Treatment Approach

The parent training treatment approach adopted in the current study was originally developed by Barkley (1987) and later modified by his colleagues at the University of Massachusetts Medical Centre (Anastopoulos & Barkley, 1990). This approach is intended for parents of children between 4 and 12 years of age with home management difficulties. A ten step program was adopted in the current study. The first step involved providing an overview of AD/HD, including a review of its history, core symptoms, current diagnostic criteria prevalence rates, associated features and developmental course. The biologically-based inborn temperament which predisposes children with AD/HD to be inattentive, impulsive and hyperactive was also discussed. The participant's mother identified several behaviours (e.g., hyperactive, inattentive behaviours) characteristic of herself and her son. His mother also discussed the role of family stress, health and financial difficulties in the development of the child's behaviour problems. A homework assignment was set, in which the subject's mother was asked to further consider the role of family stress (e.g., marital problems, occupational problems) in the development of her son's behaviour.

The second step of the program involved outlining a model for understanding parent-child conflict and providing an overview of general behaviour management principles (e.g., positive reinforcement, ignoring, punishment strategies). The subject's mother was educated about how her style of parenting affected her son's motivation to comply with her requests. His mother was trained to attend to positive behaviours and ignore negative behaviours in the context of 'special time'. Special time encompassed the participant's mother setting aside a daily time period of 15 to 20 minutes for interacting with him. He was allowed to decide, within broad limits, what to do. His mother was instructed to refrain from asking too many questions and suggesting play activities. She

observed his play (“noughts and crosses”, and the card game “uno”), narrating the activity in positive terms and ignoring mildly inappropriate behaviours. His mother commented that she found this task difficult, however, the participant enjoyed this special time.

The third step involved extending positive attending skills to increase compliance to commands and requests. In this step, skills are used to increase compliance by contingently responding to it with praise and acknowledgment. The subject’s mother was instructed to ask her son to perform very simple tasks, to which he was likely to comply (e.g., please get the milk out of the fridge) and use this time to expressly attend to, praise and reward compliance. Instructions for giving commands more effectively were also discussed. These included presenting commands as a statement, not as a question or favour, giving simple commands, and making direct eye contact with the participant to insure his attention.

Step four was an extension of Step three, providing the participant’s mother with guidelines as to how to attend to him when he was not interrupting her whilst engaged in another activity (e.g., on the phone, speaking to a visitor). His mother was instructed to frequently interrupt her own activities to praise her son for not interrupting her, so as to increase periods when he was not bothersome of her.

The fifth step involved setting up a motivational system for compliance. This system is referred to as a home poker chip/point system. This system is reward-oriented and is aimed at providing children with external motivation to complete activities requested by parents. Target behaviours and privileges that were likely to be motivating and interesting to the subject, for completion of chores/rules, were identified. Target behaviours included were those rated as most severe by his mother in the assessment phase. These included compliance in public places and in the car, doing homework, listening when spoken to, running about inappropriately, and playing quietly. The

participant's mother was instructed to use this system only for rewarding good behaviour during this week. Rewards were to be negotiated with her son. Punishment was not introduced. The subject's mother implemented the system at home with the participant and his siblings.

Step six involved adding response cost for minor misbehaviour to the system. Poker chips or points were deducted for tasks not completed (e.g., homework not completed, running around at meal times, refusal to get dressed for school). The participant's mother experienced difficulty with the system, reporting that he fought a lot with his siblings. During this week, the procedure of 'time out' was introduced. This procedure involves placing the child in a isolated section of the home, immediately following one or two non-compliant behaviours. The participant's mother reportedly used time out for fighting at home. The seventh step involved the implementation of time out from reinforcement for more serious forms of non-compliance. The problems that the participant's mother encountered with this procedure were discussed, and alternatives offered. For instance, the subject's mother decided to have the participant stand, as opposed to sit in a chair as he banged the chair against the wall. The eighth step included expanding the use of the home based poker chip system to the management of problematic behaviour in public places (e.g., supermarket, shopping malls, restaurants). The subject's mother was instructed to develop a plan for managing misbehaviour in public places prior to embarking on the situation. The plan was to be shared with the participant and his siblings, who were asked to adhere to the plan whilst in public. The ninth step of the program involved the discussion of how to adequately handle future behaviour problems, following the cessation of the program. The methods that had been successful for the participant's mother throughout the program were reviewed and applied to possible future problems her son may be at risk for (e.g., shoplifting). A booster

session was held via phone one month later. The subject's progress was discussed.

Previously acquired intervention strategies were reviewed. Post-treatment questionnaires were forwarded to the participant's mother and returned to the clinician.

Measures

The DSM-IV AD/HD Rating Scale

The DSM-IV (Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition) AD/HD Rating Scale consists of 18 items directly adapted from the AD/HD symptom list as specified in the DSM-IV. Informants are required to rate behaviours on a scale of 0 (Not at all) to 3 (Very often). Items scored as 2 (Often) or 3 (Very Often) indicate the presence of a symptom. Six of nine Inattentions symptoms are required for the Inattention Subtype. Similarly, six of nine hyperactive/impulsive symptoms are required for the Hyperactive/impulsive Subtype. Scores for the Inattention symptoms are added to obtain a total score for this dimension. Similarly, scores for the Hyperactivity/impulsivity symptoms are added to generate a total score for the Hyperactivity/impulsivity dimension. Total Inattention and Hyperactive/impulsive scores may be compared to normative DSM-IV Inattention and Hyperactive/impulsive scores (e.g., Gomez et al.,1999) .

The DSM-IV ODD Rating Scale

The DSM-IV (Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition) ODD Rating Scale was used to assess non-compliance. This scale consists of 8 items directly adapted from the ODD symptom list as specified in the DSM-IV. Informants are required to rate behaviours on a scale of 0 (Not at all) to 3 (Very often). Items scored as 2 (Often) or 3 (Very Often) indicate the presence of a symptom. Four of 8 symptoms are required for diagnosis.

The Home Situations Questionnaire

The Home Situations Questionnaire (Barkley, 1987) assesses situational behaviour problems. Parents indicate via a 'Yes' or 'No' response whether the target child experiences problems with compliance to instructions, commands or rules across 16 situations (e.g., playing alone, playing with other children, mealtimes, getting dressed, when asked to do chores, at bedtime and with a babysitter). The severity of non-compliance is also rated on a scale of 1 (mild) to 9 (severe). Two scores are derived from this scale including: a) Number of Problem Settings, and; b) Mean Severity of Non-Compliance.

Procedure

The subject was referred to the University of Ballarat AD/HD Psychology Clinic for evaluation of long standing behaviour problems and school related difficulties. A total of 15 sessions were conducted over a period of 7 months. Two weekly one-hour sessions were conducted over with the child's mother, gathering assessment data via a clinical interview and standardised rating scales. Three weekly one-hour sessions were spent with the child to conduct psychological assessment. Measures of inhibitory control, sustained attention and intelligence were administered. A one-hour session was spent with the child's school teacher to gather additional assessment information. A two-week interval preceded the commencement of treatment. Measures for the study (DSM-IV AD/HD and ODD Symptom Checklists, Home Situations Questionnaire) were completed by the subject's mother prior to the implementation of the treatment program. This is referred to as 'pre-treatment' data. Nine weekly one-hour sessions were spent with the child's mother conducting parent training based on Barkley's (1987, 1990) approach, to treat his AD/HD symptomatology and non-compliance. At the beginning of each session, the subject's mother completed the Home Situations Questionnaire. After the 9th step of

the parenting program, his mother completed the 'post treatment' measures, which included the DSM-IV AD/HD and ODD Symptom Checklists, and the Home Situations Questionnaire. A booster session (step 10 of the program) was conducted one month following the cessation of the program. The participant's mother completed the DSM-IV AD/HD and ODD Symptom Checklists, and the Home Situations Questionnaire at this time. This data is referred to as 'follow up' data.

Results

Inspection of Table 1 indicates that at pre-treatment, the participant met diagnostic criteria for AD/HD Combined Subtype based on parental report. His mother reported the presence of 9 inattention symptoms and 8 hyperactivity/impulsivity symptoms.

Inattentions symptoms included 'fails to give attention to details' (FAILS); 'difficulty sustaining attention'(DIFF-SUS); 'doesn't listen when spoken to directly'(LISTEN); 'doesn't follow through on instructions'(INSTRUCT); 'has difficulty organising activities'(ORG); 'avoids or reluctant to engage in tasks requiring sustained attention' (AVOID); 'loses things necessary for tasks' (LOSES); 'easily distracted by extraneous stimuli'(DISTRACTED); and 'forgetful in daily activities'(FORGETFUL).

Hyperactivity/impulsivity symptoms included 'fidgets with hands or feet or squirms in seat' (FIDGET); 'leaves seat when seating expected' (SEAT); 'runs about, climbs excessively (RUNS/CLIMBS); 'difficulty playing quietly' (QUIET); 'on the go, driven by motor' (MOTOR); 'blurts out answers before questions completed' (BLURTS); 'difficulty awaiting turn' (TURN); 'interrupts or intrudes on others' (INTERRUPTS). The hyperactive/impulsive symptom 'talks excessively (TALK) was not present.

At post-treatment, the subject's inattention symptoms had reduced considerably with only four symptoms rated as present (Table 1). These symptoms were DIFF-SUS, LISTEN, LOSES, and DISTRACTED. At one-month follow up, no inattention symptoms were reported. The subject's hyperactivity/impulsivity symptoms increased from 8 symptoms at pre-treatment to 9 symptoms at post-treatment (Table 1). That is, the symptom TALK was now present. Nevertheless, after the booster session, at one -month follow up, the subject's hyperactivity/impulsivity symptoms had reduced, with only four symptoms rated as present. These included MOTOR, TALKS, TURN, and

INTERRUPTS. That is, the symptoms FIDGET, SEAT, RUNS/CLIMBS, QUIETLY, and TALKS were no longer present.

Table 1 also indicates that at pre-treatment, the subject met diagnostic criteria for ODD, with 8 symptoms rated as present. These included ‘loses temper’ (TEMPER); ‘argues with adults’ (ARGUES); ‘actively defies or refuses to comply with adults’ requests or rules’ (DEFIES); ‘deliberately annoys people’ (ANNOYS); ‘blames others for mistakes’ (BLAMES); ‘touchy or easily annoyed by others’ (TOUCHY); ‘angry or resentful’ (ANGRY), and; ‘spiteful or vindictive’ (SPITEFUL). At post-treatment, the participant’s ODD symptomatology had decreased. Five symptoms were rated as present (Table 1). These included ARGUES, DEFIES, ANNOYS, BLAMES, and SPITEFUL. At follow up, the subject’s ODD symptomatology had reduced further with 2 symptoms rated as present. These were ANNOYS and SPITEFUL. The symptoms TEMPER, ARGUES, DEFIES, BLAMES, TOUCHY, and ANGRY were no longer present.

Table 1

Number of DSM-IV Inattention, Hyperactivity/impulsivity and ODD Symptoms, at Pre-Treatment, Post-Treatment and 1 Month Follow Up

	Number of DSM- IV Inattention Symptoms	Number of DSM-IV Hyperactive/Impulsive Symptoms	Number of DSM-IV ODD Symptoms
Pre-Treatment	9	8	8
Post-Treatment	4	9	5
1 Month Follow Up	0	4	2

Inspection of Table 2 indicates that in comparison with normative data for the Home Situations Questionnaire (Barkley, 1987), the number of problem settings that the participant experienced prior to treatment (12) was clinically significant (i.e., greater than 2 standard deviations above the mean). These included 'playing alone' (ALONE); 'playing with other children (CHILDREN); 'when parent on phone' (PHONE); 'watching TV (TV); 'when visitors are in the home' (VISITORS); 'visiting someone's house' (VISITING OTHER); 'in public places' (PUBLIC); 'when asked to do chores' (CHORES); 'when asked to do homework' (HOMEWORK); 'at bedtime' (BEDTIME); 'while in the car' (CAR); 'when with a babysitter' (BABYSITTER). During treatment, the number of problem settings tended to remain significant, although two non-significant periods (Weeks 4 and 8) were reported. Immediately following treatment, the subject's total number of problem settings (8) had decreased to a non-significant level. The situations in which the participant's behaviour remained problematic were ALONE, CHILDREN, PHONE, TV, VISITORS, VISITING OTHERS, PUBLIC, and BEDTIME. At follow up, the number of problem settings had decreased further to six. These included ALONE, CHILDREN TV, VISITORS, VISITING OTHERS, and BEDTIME.

Table 2 also indicates that the severity of the subject's non-compliance (7.5) was clinically significant at pre-treatment in comparison with normative data (Barkley, 1987). Although the severity of non-compliance reduced over the course of treatment, clinically significant levels were sustained throughout treatment, at post-treatment (5.5) and follow up (5.5).

Table 2

Number of Problem Settings and Mean Severity of Non Compliance, as Measured by the Home Situations Questionnaire, at Pre-Treatment, During Treatment, Post-Treatment and 1 Month Follow Up

	HSQ – No. of Problem Settings (M = 3.1;SD = 2.8)	HSQ – Mean Severity of Non-Compliance (M = 1.7; SD = 1.4)
Pre-Treatment	12*	7.5*
Week 1	12*	7.4*
Week 2	14*	5.9*
Week 3	13*	6.2*
Week 4	8	6*
Week 5	12*	5.3*
Week 6	9*	6.1*
Week 7	11*	4.9*
Week 8	8	5.6*
Post-Treatment	8	5.5*
1 Month Follow Up	6	5.5*

Note. * = >2SD's above mean (Barkley, 1987)

Discussion

The purpose of the current study was to investigate the effectiveness of Barkley's (1987) PT intervention in the treatment of non-compliance and DSM-IV AD/HD symptomatology. Taken together, the research findings support the effectiveness of Barkley's (1987) approach in the treatment of non-compliant behaviour, problem situations at home, as well as AD/HD inattention and hyperactive/impulsive symptoms. AD/HD Inattention symptoms in particular were reduced significantly following the program.

On the basis of research supporting the effectiveness of PT in the treatment of non-compliance (e.g., Forehand et al., 1979; Forehand & King, 1977; Forehand & McMahon, 1981), it was hypothesised that the participant's non-compliant behaviour, as measured by the DSM-IV ODD Rating Scale would decrease following Barkley's (1987) 10 week parent treatment program. It was also hypothesised that the number and severity of problem situations at home, as measured by the Home Situations Questionnaire, would reduce and remain stable at follow up. In light of research supporting the effectiveness of PT in the treatment of and AD/HD symptomatology (Anastopolus et al., 1993; Pisterman et al., 1989) it was hypothesised that DSM-IV AD/HD inattention and hyperactivity/impulsivity symptomatology would decrease following treatment and remain stable at follow up.

The hypothesis that non-compliance, as measured by the DSM-IV ODD Rating Scale, would decrease following treatment, and remain stable at follow-up, was supported by the data. The number of the subject's ODD symptoms reduced from 8 at pre-treatment, to 5 at post-treatment, and 2 at follow up. The hypothesis that non-compliance as measured by the number of problem settings and severity of non-compliance would

decrease following treatment, and remain stable at follow up, was also supported by the data. The participant's number of problem settings reduced from 12 at pre-treatment to 8 at post-treatment and 6 at follow up. His severity of non-compliance reduced from 7.5 at pre-treatment to 5.5 at post-treatment and follow up. It is noted, however, that whilst severity of non-compliance reduced following treatment, the degree of non-compliance remained clinically significant

These findings are consistent with previous research in which significant reductions in oppositional and non-compliant behaviour have been reported following PT programs (Anastopolous et al., 1993; Forehand, Griest, & Wells, 1979; Forehand & King, 1977; Forehand & McMahon, 1981; Peed, Roberts, & Forehand, 1977; Pollard et al., 1983; Serketich & Dumas, 1996).

The findings of the current provide strong support for the use of Barkley's (1987) PT approach with children who have a range of ODD symptoms and experience problems with compliance in a number of situations at home. In particular, these findings indicate that Barkley's approach is effective in the reduction of the ODD symptoms, 'loses temper', 'argues with adults' 'actively defies adults' requests, 'blames others for mistakes' 'touchy or easily annoyed', and 'angry or resentful. Children with such ODD symptoms, therefore, may particularly benefit from this approach. These findings also indicate that Barkley's approach is effective in increasing compliance when parents are on the phone, in public places, when children are asked to do chores and homework, while in the car and when with a babysitter. Thus, for children presenting with problems with compliance in these situations, Barkley's approach may be particularly useful.

The hypothesis that DSM-IV AD/HD inattention symptoms would decrease following treatment, and remain stable at follow up, was supported by the findings. In fact, not only did inattention symptoms reduce from 9 at pre-treatment, to 4 at post

treatment, but no inattention symptoms were reported at follow up. The hypothesis that DSM-IV AD/HD hyperactive/impulsive symptoms would decrease following treatment, and remain stable at follow up, was partially supported by the findings. Symptoms actually increased slightly from 8 at pre-treatment to 9 immediately following treatment, however, at one-month follow up the number of hyperactive/impulsive symptoms had reduced considerably to 4. These findings are consistent with previous research in which PT approaches have produced significant reductions in AD/HD symptomatology (Anastopolous et al., 1993).

These findings provide strong support for Barkley's (1987) PT program in the treatment of DSM-IV AD/HD symptoms, particularly inattention symptoms. However, the findings also indicate that hyperactive/impulsive symptoms, such as 'fidgets with hands or feet', 'leaves seat in when seating expected', 'runs about or climbs excessively' 'has difficulty playing quietly' and 'blurts out answers before questions asked' may be reduced following Barkley's approach. Children with AD/HD Combined Type, Inattentive Type or Hyperactive/Impulsive Type, therefore, may benefit from this approach. The finding that inattention symptoms reduced more considerably than hyperactive/impulsive symptoms is surprising given that the program aims to target overt non-compliance, to which the hyperactive/impulsive symptoms are most aligned. This finding, however, may be attributed to the fact that the subject was placed on stimulant medication (Ritalin) two weeks prior to the completion of the program. Nevertheless, taken together, these findings provide support for Barkley's PT approach, although the degree to which the results are attributable to the PT program is difficult to determine.

The current study indicates that parenting style affects the behaviour of children with AD/HD and associated pathology. This implies that the assessment of AD/HD children should not only include an assessment of core AD/HD, ODD and non-compliant

behaviour, but also a thorough assessment of parenting style, which may assist in determining whether PT is a viable treatment approach.

The significant reduction in non-compliance and AD/HD symptomatology reported by the subject's mother at follow up, underscores the need to collect follow up data. As the findings indicate, the participant made significant progress following the completion of the program. These findings also indicate that significant progress can be made in the absence of therapeutic contact, and that nine weeks of parent-therapist contact may be sufficient to produce significant change.

Despite the strong support that these findings offer for the use of Barkley's (1987) PT approach in the treatment of AD/HD and associated pathology, the generalisability of these results is limited. The study focused on a particular approach in the treatment of a single case study (i.e., a 5 year old boy with AD/HD). Whether these findings are specific to this case study or are representative of the wider AD/HD community cannot be concluded. Future research investigating the effectiveness of this approach in the treatment of groups of AD/HD and non-AD/HD male and female children is warranted.

The current study is also limited by several methodological issues. For instance, as discussed, the degree to which findings are attributable solely to the PT program itself is difficult to determine, given that the participant was placed on stimulant medication (Ritalin) two weeks prior to the completion of the program. Given that 70% of children with AD/HD on stimulant medication exhibit increased attention and reduced impulsivity and activity level (Wicks-Nelson & Israel, 1997), the medication may have accounted for the participant's further reductions in inattention and hyperactivity/impulsivity symptoms at post-treatment and follow up. Future research regarding the long-term effectiveness of PT interventions among medicated and non-medicated children is required. In fact, this may have contributed to the greater changes in inattention symptoms as opposed to

hyperactive/impulsive symptoms. Whether the changes in behaviour evidenced by the current study were sustained over a significant period of time (e.g., 6-12 months) was not investigated. Future studies investigating the long term effectiveness of PT interventions may shed light on this issue.

Taken together, the findings of the current study offers strong support for the use of Barkley's (1987) ten step PT approach in the treatment of non-compliance as well as DSM-IV AD/HD symptomatology. ODD symptomatology, non-compliance in a range of situations at home, as well as inattention and hyperactive/impulsive symptoms may be reduced in children with AD/HD and associated pathology following this approach. This approach offers an effective alternative to stimulant medication, however, it may also be used with children receiving medication, given that significant time is often spent non-medicated. These findings indicate that a short-term approach (i.e., 10 steps) is sufficient to produce significant change. These results of the current study also highlight the need for researchers and clinicians to obtain follow up data, given the continued progress reported by the subject's mother one month after treatment. It is recognised that the generalisability of the current findings is limited given the single case study design. Future research investigating the effectiveness of PT approaches in the treatment of a wider sample of AD/HD children is warranted.

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COGNITIVE-BEHAVIOURAL THERAPY FOR SEPARATION ANXIETY
DISORDER: A CASE STUDY

Research Project 2

Abstract

Investigations of cognitive-behavioural therapy (CBT) for anxiety disorders, such as separation anxiety disorder (SAD) are rare. The current study aims to investigate the effectiveness of a CBT intervention for SAD. A nine-year old girl with SAD and comorbid oppositional defiant disorder (ODD) and social problems, was treated with seven sessions of CBT focusing on anxiety management. Findings indicated that DSM-IV criteria for SAD were still met following treatment. However, diagnostic criteria for ODD were not met following treatment, and social problems had reduced. Taken together, the findings provide partial support for the effectiveness of CBT in the treatment of SAD, particularly the treatment of associated oppositional behaviour and social problems. The current study suffered several limitations, including the failure to incorporate a significant systematic desensitisation component, and the lack of familial involvement in the treatment process. These limitations and suggestions for future research are discussed.

What is Separation Anxiety Disorder?

According to the Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), the core feature of separation anxiety disorder (SAD) is excessive anxiety in response to real or threatened separation from the home or attachment figures. Such anxiety, however, is a normal developmental phenomenon between the ages of 7 months and 6 years (Thyer, 1991). Thus, the degree of anxiety exhibited must be inappropriate for the child's age (American Psychiatric Association, 1994). For diagnosis to occur, the disorder must have an onset before 18 years of age, with symptoms persisting for a period of at least four weeks. Significant distress or impaired functioning in social, academic or other areas must also be evident (American Psychiatric Association, 1994).

Separation anxiety manifests in a number of ways. When separation from attachment figures occurs or is anticipated, physical complaints such as headaches, stomach aches, nausea and vomiting may be displayed (Tonge, 1991). These complaints often result in immediate attention from parents, which may in turn act as a form of positive reinforcement and secondary gain, thereby perpetuating the problem (Tonge, 1994). Children with SAD may become extremely upset, oppositional, and defiant as a result of separation, and may insist on knowing the whereabouts of attachment figures (Tonge, 1994). Indeed, research attests to significant externalising problems in children with SAD (Barrett, 1998; Kendall, 1994). Children with SAD commonly experience unrealistic and exaggerated concerns regarding separation, such as the belief that harm will become their parent, or that the attachment figures will leave and never return.

Children with SAD may also refuse to attend school in order to remain with attachment figures (Phelps, Cox, & Bajorek, 1992). Indeed, up to 75% of children with SAD display school refusal (Last, Francis, Hersen, Kazdin, & Strauss, 1987). A

reluctance or refusal to attend school camps and sleep over at friends' houses is also common. These children may also drop out of activities if their parents are not involved, all of which may contribute to a deterioration of friendship networks (Tonge, 1991). Indeed, several researchers have documented significant peer related problems among children with SAD (Klein & Last, 1989; Strauss, Lease, Kazdin, Dulcan & Last, 1989).

Children with SAD commonly display clingy behaviour, staying physically close to attachment figures. Often such children have difficulty at bedtime, requesting that someone stay with them until they fall asleep (Graziano & Mooney, 1980). They may request to sleep with their parents during the night, however, if this is refused, may sleep outside the parents' door. Nightmares with a theme of separation are also common, particularly among younger children (Bell-Dolan, Last & Strauss, 1990).

Prevalence

According to DSM-IV (American Psychiatric Association, 1994), SAD is not uncommon, occurring in approximately 4% of the population. Prevalence rates based on non-referred children have ranged from 1% (Ollendick & Mayer, 1984), to 2.4% (Bowen, Offord, & Boyle, 1990) to 3.5% (Anderson, Williams, McGee, & Silva, 1987). Estimates drawn from clinical samples indicate that between 1% and 8% of children attending psychiatric clinics incur a diagnosis of SAD, which usually presents as school refusal (Hersov, 1985a; Hersov, 1985b). The sex distribution of SAD remains controversial (Tonge, 1994). Whilst DSM-IV reports that among clinical samples, SAD is equally common among males and females, other studies of clinical populations have indicated that more females than males present with SAD (Last, Hersen, Kazdin, Finkelstein, & Strauss, 1987).

Age of Onset

The mean age of presentation for SAD is approximately 9 years of age (Last, Hersen, et al., 1987a). SAD is more prevalent among pre-pubertal children than adolescents (Geller, Chestnut, Miller, Price, & Yates, 1985). The onset of SAD may be acute, in which case it may be precipitated by a range of factors such as an emotional upset, traumatic life event (Tonge, 1994), or a transitional experience such as moving house or graduating from primary to secondary school (Tonge, 1994). Chronic illness may also precipitate the onset of SAD (Breslau, 1985).

Associated Symptomatology

As discussed earlier, social problems are common with children with SAD (Klein & Last, 1989; Strauss et al., 1989). Irritability and oppositional behaviour are also a common response to pending separation (Tonge, 1994). Children with SAD may also present with a host of specific fears in addition to their fear of separation, such as a fear of getting lost (Last, Francis, & Strauss, 1989), a fear of monsters, spiders, animals, and the dark (Last, 1988; Ollendick & Huntzinger, 1990). These fears may or may not be of phobic proportion. Approximately one third of children with SAD present with a co-morbid overanxious disorder (currently referred to as generalised anxiety disorder) which is typically secondary to the separation anxiety (Last, Strauss, & Francis, 1987; Werry, 1992). Approximately one third of children with SAD also present with a co-morbid depressive disorder, which generally develops several months after the onset of SAD (Last, Strauss & Francis, 1987).

Long term implications for adult functioning have also been documented. Several investigations have reported that a significant number of adults with anxiety disorders indicate they suffered from separation anxiety or general anxiety symptoms as children (Last, Hersen, Kazdin, Francies, & Grubb, 1987; Last, Phillips, & Statfeld, 1987).

Etiology of SAD

Etiological theories regarding the development of SAD may be drawn from the childhood anxiety literature. Those that have dominated the field include psychodynamic, behavioural and cognitive-behavioural perspectives. Familial factors have also been noted to contribute to the development of SAD. These theories are discussed below.

Psychodynamic Theories

Psychoanalysis was first applied to childhood disorders in 1909 by Freud, who attempted to explain the development of a young child's fear of horses and of leaving the home (Dadds, Heard & Rapee, 1991). According to Freud, the child's fears stemmed from the oedipal conflict. Leaving the home had become associated with the boy witnessing a horse's violent fall in the street. According to Freud, the horse's struggle brought into consciousness the boy's unconscious desire to harm his father. This in turn produced significant anxiety in the form of a fear of horses and of leaving the home. The psychodynamic perspective, therefore, views feared stimuli as secondary to the internal stimuli they represent. Several uncontrolled case studies using psychodynamic techniques have claimed effectiveness with anxious children however, controlled studies have produced equivocal findings (Milos & Reiss, 1982). Overall such methods have generated little support in the childhood anxiety literature (Dadds et al., 1991). Other difficulties with this approach have been cited in the literature, such as the length of time needed to implement the techniques (King et al., 1988).

Familial Factors

Familial factors have also been implicated in the development of the disorder. A series of studies by Leckman and colleagues (Leckman, Merikangas, & Pauls, 1983; Leckman, Weissman, & Merikangas, 1983) reported a familial relationship between anxiety and depressive disorders in the first-degree relatives of children with anxiety disorders. Specifically, mothers suffering depression and panic disorder had the greatest association with anxiety in their children (who had a 38% chance of having SAD). Other studies have supported the increased risk of anxiety disorder in children with either anxious or dysthymic parents (Turner, Beidel, & Costello, 1987). For instance, Last, Hersen, Kazdin, Francis, et al. (1987) found that mothers of anxiety disordered children had a much higher lifetime rate of anxiety disorders (83%) than mothers of children in the control group (40%). Other factors such as family conflict and marital discord, and parental reinforcement of avoidance as a coping strategy have been implicated in the development and maintenance of childhood anxiety (Barrett, Rapee, Dadds, & Ryan, 1996; Bruch, Heimberg, Berger, & Collins, 1989; Turner, Beidel, & Epstein, 1991).

Behavioural Theories

Behavioural theories of childhood anxiety emphasise conditioning and social learning processes (King, Tonge, et al., 1988; Thyer & Soers-Hoag, 1988). According to the classical conditioning approach, a previously neutral stimulus (e.g., shopping malls) becomes threatening through an association with unconditioned aversive stimuli (e.g., getting lost, fainting, feeling ill). Avoidance of the feared stimulus serves to maintain the fear by precluding any natural extinction of the feared response. Operant factors such as reinforcement from others may also lead to the development and maintenance of anxiety (e.g., a parent providing immediate attention and concern to a child with SAD who displays a host of psychosomatic symptoms upon impending separation). Social learning

factors such as modelling have also been implicated in the development of anxiety disorders (King, Tonge, et al., 1988). For instance, research indicates that children are particularly susceptible to imitation of fear responses in significant others (Dadds, et al., 1991).

Cognitive-Behavioural Theories

Cognitive behavioural theory holds that individuals do not respond directly to their environment. Rather, one's response is mediated by cognitive processes (Kendall & Gosch, 1994). A given situation will produce different responses depending on the content of the individual's thought and the manner of cognitive processing. Anxiety results from dysfunctional cognitive processing, such as cognitive deficiencies or cognitive distortions. According to Kendall and Gosch (1994) anxious children often suffer from cognitive distortions. They frequently mis-perceive the demands of the environment and their personal abilities, viewing themselves hypercritically and underestimating their true abilities. Indeed, studies examining children's cognitions as part of treatment for anxiety disorders have found that cognitions are important in the assessment and treatment process (Morris & Kratochwill, 1983).

Treatment of SAD

Several treatment approaches have been espoused for SAD. These include psychodynamic interventions, family therapy, behaviour therapy and cognitive-behavioural therapy (CBT). Behavioural and CBT approaches for SAD are discussed below.

Behaviour Therapy

Behavioural techniques such as systematic desensitisation, (Kellerman, 1980; Lazarus, 1960; Miller, 1972) and contingency management (Neisworth, Madle, & Goeke, 1975) have been successful in the treatment of SAD. In a review of the behavioural

treatment of SAD, Thyer and Soers-Hoag (1988) found that of eleven published reports, all included elements of gradual or rapid exposure therapy to anxiety-evoking stimuli, in this case, the absence of caregivers. In most instances, this was done gradually and in combination with operant procedures such as social or edible reinforcement for non-anxious behaviour. Exposure in imagination was also employed by several studies prior to in vivo practice. All such investigations reported positive results. For example, Martin and Korte (1978) successfully implemented an operant program of shaping, positive reinforcement and contingency management to reduce the separation anxiety of a seven-year-old Hispanic child. Initially, the child's mother attended the school with the child, gradually fading her presence by leaving the classroom for increasingly greater periods of time. After a week of this program, the child was able to attend school by herself all day, informing her mother that she no longer needed to accompany her. The problem did not recur for the remainder of the year.

Several criticisms have been levelled at behavioural treatments of SAD. In particular, most studies have employed single case designs. Few studies have employed experimental designs, with the majority of investigations consisting of narrative reports of intervention procedures (Dadds et al., 1991; King, Hamilton & Ollendick, 1988). Further, recent research indicates that there may be cognitive component to the development of childhood anxiety. For example, empirical work suggests that thoughts relating to fear of evaluation by others are common in anxious persons (Kendall, Howard, & Epps, 1988). Highly anxious children have also been found to show more task-debilitating cognition during test taking, including more negative self evaluation, more off-task thoughts and less positive self evaluation. Such children have been found to report more negative self speech, including a preoccupation with fear of harm during natural fear provoking situations (Prins, 1986).

Cognitive-Behavioural Treatment

The correction of maladaptive cognitive processes is a core objective of the cognitive-behavioural treatment regime. Studies of cognitive-behavioural treatments of childhood anxiety incorporating both behavioural (e., in vivo exposure, relaxation and contingency management) and cognitive techniques (e.g., self-instructional training) have focused on the usefulness of CBT for specific fears. Most investigations have reported greater improvements in treatment conditions in comparison with control groups for behaviours such as school refusal (King, Hamilton, & Ollendick, 1998; Mansdorf & Lukens, 1987), night time fears (Kanfer, Karoly, & Mewman, 1975) and fear of medical procedures (Kendall et al., 1992). To a lesser extent, research has supported the use of CBT in the treatment of general anxiety disorders, such as separation anxiety disorder and generalised anxiety disorder.

Several investigations have found cognitive-behavioural interventions to produce superior results for SAD children in comparison with wait list controls (e.g., Barrett, 1998; Kendall, 1994). For example, Kendall (1994) taught 27 children with a diagnosis either of overanxious disorder, SAD or avoidant disorder a range of cognitive-behavioural techniques over 16 sessions. These included developing realistic expectations, self talk, self evaluation, as well as modelling, exposure and relaxation training. Results indicated that 66% of treated subjects at post treatment did not meet criteria for their pre-treatment anxiety disorder. SAD children were also reported to experience fewer externalising problems on the Child Behaviour Checklist (CBCL) at post-treatment than controls.

Similarly, Barrett, Rapee and Dadds (1996) in a study of CBT for children with anxiety disorders found that almost 70% of children who completed treatment in either an individual or family program, did not meet criteria for an anxiety disorder at post treatment. Recent research has also highlighted the effectiveness of cognitive-behavioural

family based interventions for the treatment of childhood anxiety disorders such as overanxious disorder, separation anxiety disorder and social phobia (Barrett et al., 1996; Barrett, 1998; Howard & Kendall, 1996). For instance, Howard and Kendall (1996) demonstrated the effectiveness of a cognitive-behavioural family therapy intervention with six clinically anxious children aged 9 to 13 years. Results indicated significant changes in diagnostic status as well as CBCL internalising and externalising scores at post treatment. Barrett (1998) also reported similar findings. Children in the CBT group and the family intervention plus CBT group had fewer anxiety disorders and lower internalising and externalising scores on the CBCL than those in the wait list condition.

In light of the empirical support for CBT in the treatment of SAD (Barrett et al., 1996; Barrett, 1998; Howard & Kendall, 1996), and co-morbid internalising and externalising behaviours (Barrett, 1998; Kendall, 1994), the current study employed a CBT approach in the treatment of a nine year old girl with DSM-IV SAD and co-morbid oppositional defiant disorder (ODD) and social problems. An individual CBT program for SAD was developed based on Kendall's (1990) treatment protocol for childhood anxiety disorders. On the basis of research indicating the effectiveness of CBT interventions in the treatment of anxiety disorders including SAD (e.g., Kendall, 1994; Kendall et al., 1997; Barrett et al., 1996) it was hypothesised that DSM-IV SAD symptoms would decrease following CBT treatment. Based on research indicating the effectiveness of CBT interventions in the reduction of associated internalising and externalising behaviours (Barrett, 1998; Kendall, 1994) it was also hypothesised that the participant's aggression and social problems would reduce following treatment.

Method

Participant

The following case was referred to the Clinical Health Psychology Department of the Ballarat Base Hospital, located in rural Victoria, Australia. A Clinical Health Psychologist and probationary psychologists staff the Department. A University of Ballarat doctoral student on placement at the hospital was supervised by the Clinical Health Psychologist to undertake assessment and treatment of the following case.

Reason for Referral

A nine-year old female was referred to the Clinical Health Psychology Department of the Ballarat Base Hospital by the Pediatric Unit, for psychological assessment and treatment. The participant initially presented to the Pediatric Unit with extreme shortness of breath, fearing she was going to die. Her mother attributed this behaviour to the subject's long-term asthma condition. However, upon presentation, she was diagnosed as experiencing a panic attack, as opposed to an asthma attack. Whilst in hospital, the subject suffered a second panic attack when her mother left the hospital to go home. Following discharge from the hospital, the participant was referred to the Clinical Health Psychology Department of the hospital for psychological assessment and treatment.

Background Information

The subject was the youngest of five children, with two older twin brothers (28 years), and two older sisters (23 and 18 years). At the time of assessment, the subject resided with both parents and her 18-year-old sister in Ballarat, Victoria. Her older twin brother and his daughter (3 years) had recently moved into the family home, following the death of his fiance.

The subject was reported to have suffered heavily from asthma since a young age (approximately 2-3 years), for which she remained medicated at the time of referral. As a result, she had missed school on many occasions. The subject was reported to be a clingy child, displaying extreme distress and oppositional behaviour pending separation from attachment figures, particularly her mother. She would complain of a stomach-ache and headache, and display marked oppositional and aggressive behaviour. The participant was reported to lose her temper, shout and yell at her mother, cry and throw herself on the floor. Following separation, she would continue to worry about her mother, fearing she would have a car accident and die. The participant would commonly wait by the window for her mother's return.

School refusal was a daily occurrence, and attendance at school camps difficult. The participant was unable to stay with friends or relatives. She also experienced difficulty interacting with peers at school and participating in sporting activities. The participant reported that other children did not like her and that she was teased a lot. Her mother reported that she was clingy and dependent and got along better with adults than children. The subject indicated that she only had one good friend, and often spent lunchtimes on her own.

According to her mother, the participant's separation anxiety worsened when her brother's fiance died suddenly approximately 12 months prior to the referral. This anxiety was further exacerbated by an incident at school shortly after when the subject was threatened by another child, who stated he was going to stab her with a knife.

Procedure

A total of fifteen sessions were held at the outpatient Clinical Health Psychology Department of the Ballarat Base hospital, conducting psychological assessment (eight sessions) and treatment (seven sessions). Sessions were conducted over a five-month period.

Assessment Process

A total of eight sessions were spent conducting psychological assessment with the participant, her mother and teacher. Four weekly sessions were conducted with the participant's mother. The first two sessions were spent obtaining information about the current problem, background information (e.g., familial constellation) and medical and developmental histories. To obtain further information about the participant's separation anxiety, oppositional behaviour and co-morbid social problems, as indicated by her mother in the initial assessment sessions, several standardised psychological assessment instruments were administered in sessions three and four. These included the Child Behaviour Checklist (CBCL; Achenbach & Edelbrock, 1983), the DSM-IV Symptom Checklists for SAD and oppositional defiant disorder (ODD), and the Anxiety Disorders Interview Schedule, Parent Version (ADIS – P; Silverman & Albano, 1996).

The DSM-IV Symptom checklist for SAD includes all eight DSM-IV diagnostic criteria for the disorder. Questions are rated on a scale from 0 (not at all) to 3 (very much). Items scored as 2 or 3 are regarded as meeting diagnostic criteria. The DSM-IV requires that a minimum of three of eight symptoms be present for at least four weeks, resulting in significant impairment in functioning, for diagnosis to occur. Similarly, the DSM-IV Symptom Checklist for ODD includes all eight diagnostic criteria. Questions are also rated on a scale from 0 (not at all) to 3 (very much). Items scored as 2 or 3 are regarded as meeting diagnostic criteria. The DSM-IV requires that a minimum of four of

eight symptoms be present for at least four weeks, resulting in significant impairment in functioning, for diagnosis to occur. This rating scale is similar to other new DSM-IV AD/HD and ODD rating scales (Du Paul, Power, Anastopoulos, Reid, McGoey, & Ikeda, 1997; Gomez, Harvey, Quick, Scharer, & Harris, 1999). Whilst the psychometric properties of this scale are yet to be documented, similar scales such as the DSM-IV AD/HD Rating Scale have produced adequate test-retest reliabilities and concurrent validity statistics (Gomez et al., 1999).

The Child Behaviour Checklist (CBCL; Achenbach & Edelbrock, 1983) is a parent-completed multidimensional instrument assessing a range of childhood psychopathology symptoms. The CBCL is designed for use by parents of children aged 4 to 16 years. One hundred and twelve items are scored as either 0 (Not True), 1 (Somewhat or Sometimes True) or 2 (Very True or Often True). On the basis of parental responses, eight clinical scales regarding specific childhood diagnostic categories are derived, including 1) withdrawal, 2) somatic complaints, 3) anxiety/depression, 4) social problems, 5) thought problems, 6) attention problems, 7) delinquent behaviour and 8) aggressive behaviour. The teacher version of the CBCL (The Teacher Report Format; TRF) also produces scores on such scales. Responses made on the Child Behaviour Checklist resulting in T-scores greater than two standard deviations above the mean (i.e., T-scores of 70 and above) are indicative of clinically significant problems. T-scores of 67-69 are considered to reflect problems that are at the 'borderline' level.

The CBCL is a widely used tool. Several studies have reported data supporting the concurrent and construct validity of the CBCL. It has been found to correlate significantly with other childhood rating scales such as the Conners Parent Rating Scale, Revised Behaviour Problem Checklist, Teacher Report Form and Youth Self-Report Form (Achenbach & Edelbrock, 1983). Evidence also supports the discriminant validity

of the CBCL. For instance, The scale has been found to discriminate clinic from nonreferred children (Achenbach & Edelbrock, 1983; Breen & Barkley, 1988; Jones, Latkowski, Kircher, & McMahon, 1988), hyperactive from normal children (Barkley, 1981).

In the fourth assessment session with the participant's mother, the Anxiety Disorders Interview Schedule, Parent Version (ADIS-P; Silverman & Albano, 1996) was administered. The ADIS-P is a structured clinical interview, covering DSM-IV criteria for a range of childhood problems, including learning problems, attention-deficit/hyperactivity disorder, conduct disorder, ODD, depression, interpersonal problems, sleeping problems, enuresis, and a range of anxiety disorder including post-traumatic stress disorder, social phobia, specific phobia, generalised anxiety disorder, panic disorder, and separation anxiety disorder.

Following the assessment sessions with the subject's mother, two sessions were spent conducting psychological assessment with the participant. A brief semi-structured interview was administered in which diagnostic criteria for SAD and ODD in particular were discussed. Familial factors (e.g, relationships with family members, death of brother's fiance), progress at school and friendship networks were also discussed. The participant was asked to draw her family, to describe a good dream and a bad dream, and to list three wishes.

The final component of the assessment process involved a consultation with the participant's teacher, following the teacher's completion of the Teacher Report Form (TRF) of the CBCL and the DSM-IV Symptom Checklists for ODD. Peer problems, academic progress and anxiety-related and oppositional behaviours were discussed.

Assessment Results and Diagnosis

Results of the assessment process indicated that the participant met diagnostic criteria for SAD and ODD. Significant social problems were also apparent. Each diagnosis is discussed separately below.

Separation Anxiety Disorder

A diagnosis of SAD was made on the basis of parental responses on the DSM-IV Symptom Checklist for SAD and the ADIS-P, and the participant's responses to a semi-structured clinical interview. For instance, on the DSM-IV Symptom Checklist for SAD, seven of eight SAD symptoms were present. These included: 1) experiences recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated (SEPARATION); 2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures (LOSING); 3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped) (UNTOWARD); 4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (SCHOOL); 5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant attachment adults in other settings (ALONE); 6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (SLEEP), and; 7) repeated complaints of physical symptoms, such as headaches, stomachaches, nausea, or vomiting, when separation from major attachment figures occurs or is anticipated (PHYSICAL). The symptom 'experiences repeated nightmares involving the theme of separation (NIGHTMARES)' was not present.

Diagnostic criteria for SAD were also met on the ADIS-P. Seven of eight symptoms were present prior to age six, had persisted for at least four weeks, and resulted in significant functional impairment. The subject was also reported to experience

generalised anxiety disorder (GAD) symptoms on the ADIS-P (e.g., worry about a number of events accompanied by a range of physical symptoms). However, as the focus of the anxiety was about being away from attachment figures, a diagnosis of GAD was precluded.

A semi-structured interview with the child confirmed the presence of SAD symptomatology, such as a fear of being separated from her mother, harm befalling her mother, reluctance to go to school and reluctance to go to sleep without being near attachment figures.

Oppositional Defiant Disorder

A diagnosis of ODD was made on the basis of parent ratings on the DSM-IV Symptom Checklist for ODD, the ADIS-P and the CBCL. On the DSM-IV Symptom Checklist for ODD, five of eight symptoms were endorsed. These included: 1) 'loses temper' (TEMPER); 2) 'argues with adults' (ARGUES); 3) 'actively defies or refuses to comply with adults' requests or rules' (DEFIES); 4) 'deliberately annoys people' (ANNOYS), and; 5) 'touchy or easily annoyed by others' (TOUCHY). The symptoms 'blames others for mistakes' (BLAMES); 'angry or resentful' (ANGRY), and; 'spiteful or vindictive' (SPITEFUL) were not rated as present by the subject's mother. It is noted that the participant's teacher did not endorse the presence of any oppositional defiant disorder symptoms on the DSM-IV Symptom Checklist for ODD. The disorder, therefore, was conceptualised to occur in the home environment and typically in response to pending separation from attachment figures.

On the ADIS-P, the subject also met diagnostic criteria for ODD. Five of eight symptoms were present, causing clinically significant impairment in functioning. CBCL findings also indicated that the subject experienced clinically significant aggressive behaviour at home (T = 70), however, not at school (T = 58). A semi-structured clinical

interview with the subject indicated the presence of several ODD symptoms. The participant indicated that she became very upset and angry when her mother left the house without her, would cry and yell at her mother.

Social Problems

Significant social problems were indicated by parental reports on the CBCL and a semi-structured interview with the child. Findings from the CBCL indicated that the subject experienced clinically significant social problems ($T = 77$). A semi-structured interview with the child indicated that she was teased a lot by other children and had only one good friend. She indicated that she had been teased by other children since grade prep and had been threatened with a knife by a child at school.

Following the assessment and diagnosis process, a feedback session was held with the participant's mother. Information regarding the diagnosis was provided to the subject's mother and suitability for individual cognitive-behavioural therapy was discussed. The child was also informed of the possibility of individual sessions for the treatment of 'worrying' behaviour. Prior to the implementation of CBT, pre-treatment measures were obtained for the current study. These included the DSM-IV Symptom Checklists for SAD and ODD, and the CBCL. These same measures were administered after the final treatment session. The treatment process is discussed in detail below.

Treatment Approach

The treatment approach adopted in the current study was based on Kendall's Cognitive-Behavioural Treatment program (Coping Cat Workbook; Kendall, 1990) for childhood anxiety disorders. This program includes two components. These are 1) training sessions in anxiety management and 2) systematic desensitisation procedures. Between 5-10 sessions are generally spent conducting anxiety management training sessions. These sessions include role-plays, relaxation and the identification of positive

and negative thoughts are included. The use of self-talk is also introduced followed by principles of self-evaluation and reward. Systematic desensitisation procedures are also usually conducted over the course of 5-10. Anxiety coping skills learned in initial sessions are implemented when participants are exposed in vivo to feared situations, beginning with the least anxiety-provoking and increasing to more stressful situations.

Due to the time constraints, the current treatment approach included training sessions in anxiety management only. In vivo exposure to feared situations was not incorporated. Session 1 consisted of identifying emotions and feelings, especially anxiety. The participant and the therapist looked through magazines at a range of different people expressing different emotions. The subject identified people who were 'happy', 'sad', 'scared' and 'excited'. She was asked to discuss how we know how people are feeling (e.g., facial expressions, body language), and indicated that the happy people were smiling, sad people were crying and those who were scared had a 'scrunched up face' and were 'biting their nails'. Homework tasks were set. She was asked to cut out pictures of people from magazines and stick them in a book, writing next to each person the emotion that they were feeling (e.g., anxiety) and behavioural indicators of that emotion. The subject was also asked to record one pleasant and one unpleasant situation that occurred throughout the week, noting how she felt, and the associated physical symptoms. The session and homework tasks were discussed with the participant's mother.

The second session involved an initial review of homework tasks. The therapist and the participant discussed pictures of people expressing different emotions. The subject indicated that an unpleasant situation that had occurred during the week was learning Japanese at school. She felt nervous, her legs began to shake and her face flushed with colour at this time. Relaxation techniques were introduced in this session.

The subject was instructed to lay on the floor with her eyes closed, in a comfortable position. She breathed in and out slowly, counting to ten. This exercised was also practiced in a sitting up position. She was instructed to feel her body breathing in and out. The therapist modelled these techniques. For homework, the subject was asked to practice relaxing, sitting up and lying down every day. She recorded in her workbook the days when her task was completed and how she felt after relaxation.

The third session was spent introducing a different type of relaxation, guided imagery. The participant identified a happy memory (her pet bird). She was again instructed to lay down and make herself comfortable. Once her eyes were closed, the therapist asked her to visualise the bird, to think about the sounds it makes, how it feels to touch it and what it looks like, whilst continuing to breathe in and out slowly. The subject's homework for the week consisted of practicing guided imagery every day, and recording her feelings after the relaxation.

Session 4 consisted of teaching the subject to recognise her self talk during anxious situations, and to correct maladaptive thoughts. First, she identified situations in which she felt nervous. These included when her mother left the house without her, toward the end of the day when she has to be picked up from school, at night time, and going on school camps. The participant discussed what she was thinking when her mum would leave the house without her. She indicated that she thought if her mother went out without her she might have a car accident and die. This thought was challenged. The subject recognised that her mother had not had a car accident before, that she had always come home before she went to bed, and that it was not likely she would die just because she left the house. The participant substituted her maladaptive cognitions with more rational thoughts such as 'mum would be fine without me', 'she has just gone to the shops and will be home soon'. Other maladaptive cognitions (e.g., 'what if no-one picks me up

from school?') were challenged and substituted for more rational cognitions (e.g., 'mum or dad will pick me up from school today').

The fifth session involved the introduction of problem solving techniques. These included enlisting the support of a hero, and talking about her anxious feelings to someone at home and/or school. The therapist and participant discussed the role of hero figures. The subject discussed how one of her favourite heroes (a Pokemon character), would tackle an anxiety-provoking situation, and how this could help her overcome her anxiety (e.g., think about this hero would deal with the situation). She also discussed talking about her anxious feelings to someone at home (e.g., mum, dad). Her homework for the week was set, which included enlisting the support of a hero and/or talking to her parents when feeling anxious. The subject was instructed to record when she used these problem-solving approaches, and how she felt afterwards. Termination of therapy was introduced briefly during this session, given her tendency to form strong attachments with role models.

In Session 6, the principles of self-evaluation and reward were introduced. The participant identified that she could allow herself to play on the computer for 30 minutes after handling a situation in which she normally feels anxious. Time was also spent addressing issues surrounding termination of therapy.

The seventh session was spent reviewing concepts and skills and discussing feelings regarding termination. The subject indicated that the guided imagery technique, and enlisting the support of a hero had worked well for her during the course of therapy, and was keen to continue practicing these skills.

Results

Table 1 shows that at pre-treatment, seven of eight SAD symptoms were present. These included SEPARATION, LOSING, UNTOWARD, SCHOOL, ALONE, SLEEP, and PHYSICAL. These same symptoms were present at post-treatment. Table 1 also indicates that at pre-treatment, five of eight ODD symptoms were present. These included TEMPER, ARGUES, DEFIES, ANNOYS, and TOUCHY. At post-treatment, no ODD symptoms were present.

Table 1

Number of DSM-IV SAD and ODD Symptoms, and CBCL scores at Pre-Treatment and Post-Treatment

	Pre-Treatment	Post-Treatment
Number of DSM-IV		
Symptoms:		
SAD	7	7
ODD	5	0
CBCL:		
Aggressive Behaviour	70	55
Social Problems	77	70
Anxiety/Depressive	65	66

Note. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; SAD = Separation Anxiety Disorder; ODD = Oppositional Defiant Disorder; CBCL = Child Behavior Checklist; Total number of symptoms for SAD = 8; Total number of symptoms for ODD = 8; * = clinically significant level (based on at least 2 standard deviations above the normative mean)

Inspection of Table 1 also indicates that at pre-treatment, CBCL aggressive behaviour was clinically significant ($T = 70$). CBCL aggression reduced to a non-significant level at post-treatment ($T = 55$). In addition, Table 1 shows that at pre-treatment, CBCL social problems were clinically significant ($T = 77$). At post-treatment, CBCL social problems reduced, however, remained clinically significant ($T = 70$). Table 1 indicates that CBCL anxiety/depressive scores approached clinical significance at pre-treatment ($T = 65$) and remained stable at post-treatment ($T = 66$).

Discussion

On the basis of research attesting to the effectiveness of CBT interventions in the treatment of anxiety disorders, including SAD (e.g., Kendall, 1994; Kendall et al., 1997; Barrett et al., 1996), it was hypothesised that DSM-IV SAD symptomatology would reduce following treatment. Based on reports of significant reductions in co-morbid internalising and externalising problems in children with SAD (Barrett, 1998; Kendall, 1994) it was also hypothesised that the subject's level of aggression and social problems would reduce following treatment.

The hypothesis that DSM-IV SAD symptoms would reduce following treatment was not supported. At pre-treatment, the participant's mother endorsed the presence of seven DSM-IV SAD symptoms. These included SEPARATION, LOSING, UNTOWARD, SCHOOL, ALONE, SLEEP, and PHYSICAL. These same seven symptoms were also present at post-treatment. This finding indicates that the treatment approach adopted in the current study was not appropriate for the reduction of separation anxiety symptomatology in this particular subject. This finding is inconsistent with previous research in which groups of children with anxiety disorders have been found display significant reductions in internalising and anxious behaviour following CBT treatment (e.g., Barrett, 1998; Barrett et al., 1996; Kendall 1994). However, different criteria for treatment success were used in these studies in comparison with the criteria used in the current study. That is, previous investigations (Barrett, 1998; Barrett et al., 1996; Kendall 1994) reported changes in overall anxiety and internalising scores on measures such as the CBCL. The current study, however, adopted a more stringent approach, with a reduction in actual clinical symptomatology used as the benchmark for success. In addition, a closer examination of the findings reported by Kendall (1994) for example, indicate significant individual variation in response to treatment (i.e., substantial

standard deviations). That is, whilst some children with SAD responded positively to treatment, some children in this group did not (Kendall, 1994). The finding that not all children respond positively to CBT treatment requires an analysis of factors that may moderate response to treatment.

In the current study, it is possible that the child's age, and familial involvement may have moderated response to treatment. For instance, the participant in the current study was nine years of age. It is possible that her young age, in combination with the strong cognitive focus of the intervention, may have moderated her response to treatment. In addition, it is possible that the lack of familial involvement in the treatment process may have moderated the child's response to treatment. For instance, whilst the subject's mother was informed of the details of each session, she was not directly involved in the treatment process. Given that the child's mother actually acknowledged having contributed to the child's anxiety by rarely leaving her as a young child, her absence in the treatment process may have contributed to the persistence of SAD symptomatology. Indeed, research indicates that family processes may enhance avoidant responses in anxious children (Barret et al., 1996), and researchers have called for the incorporation of family members in the treatment of anxious children (Kendall, 1994).

Several studies document the effectiveness and importance of incorporating the family in the treatment of childhood anxiety (Barret et al., 1996; Howard & Kendall, 1996). Family members may, for instance, prompt the adoption of a particular coping strategy, and reward courageous behaviour. Family based interventions may also incorporate teaching parents how to deal with their own emotionality, for example, gain awareness of their own responses to anxiety provoking situations, how to best respond to conflict and how to effectively problem solve (Barrett, 1998).

It may also be speculated that the persistence of the child's SAD symptomatology in the current study may be attributed to the failure to include systematic desensitisation procedures in the treatment process. Seven training sessions for anxiety management only were included. Previous research in which significant reductions in anxiety have been reported following CBT have incorporated anxiety management sessions, and spent between five and ten sessions implementing systematic desensitisation procedures (Barrett, 1998; Kendall, 1994). Future treatment studies of SAD, therefore, may benefit from an inclusion of anxiety management training sessions in combination with in vivo systematic desensitisation procedures, so that children can practice newly learned techniques in imaginal and real situations. Future studies of moderating factors in the treatment of SAD, such as age and familial involvement, are also required.

The hypothesis that the participant's level of aggression and social problems would decrease following treatment was supported by the findings. At post-treatment, diagnostic criteria for ODD were no longer met. CBCL aggression had also reduced to a non-significant level ($T = 55$). The participant's pre-treatment social problems ($T = 77$) had also decreased however remained clinically significant ($T = 70$). These findings are consistent with previous research in which children with SAD have been found to experience fewer CBCL internalising and externalising behaviours following CBT (Barrett, 1998; Kendall, 1994). These findings indicate that CBT treatment approaches are effective for the reduction of aggression and social problems in anxious children. Once children are able to cope more effectively with separation from attachment figures, a reduction in oppositional and social problems may result. These findings also highlight the importance of conducting a comprehensive assessment of SAD. In addition to an

assessment of core SAD symptoms, clinicians should assess a range of internalising and externalising behaviours, such as aggression and social problems.

Taken together, these findings offer preliminary support for the use of CBT interventions in the treatment of SAD, particularly associated levels of aggression and social problems. Despite the apparent treatment gains, the current study suffered several limitations. For instance, the study employed a single case design. This approach limits the generalisability of the findings. In addition, as discussed, only seven anxiety-management training sessions were conducted. Systematic desensitisation was not included as part of the treatment program due to the limited number of sessions. Further, her parents and family members were not directly involved in the treatment process. Finally, follow up data could not be obtained. Whether treatment gains were maintained following treatment therefore, cannot be determined. Future treatment studies of SAD should aim to examine a greater number of SAD children and control subjects, include anxiety management and systematic desensitisation procedures, and where possible, involve family members in the treatment process. Gathering follow up data to provide a comprehensive evaluation of the treatment process is also strongly encouraged.

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FAMILY COGNITIVE-BEHAVIOURAL THERAPY AND SOCIAL SKILLS
TRAINING FOR THE TREATMENT OF SEPARATION ANXIETY
DISORDER: A CASE STUDY

Research Project 3

Abstract

In recent times, researchers have evaluated family cognitive-behavioural therapy (CBT) for anxiety disorders, such as separation anxiety disorder (SAD). Studies incorporating social skills training for children with SAD, however, are rare. The current study aims to investigate the effectiveness of a family CBT intervention for SAD in conjunction with social skills training. A ten-year old boy with SAD and significant social problems was treated using a family CBT treatment program and social skills training. This program involved individual CBT sessions, family anxiety management sessions and individual assertiveness training. Findings indicated that the participant no longer met diagnostic criteria for SAD at post-treatment. The participant's social problems also decreased to a non-significant level following treatment. Taken together, the findings provide support for family CBT and social skills training in the treatment of SAD and associated social problems. The current study, however, suffered several limitations, such as the use of a single case design, and the brief nature of the therapy in comparison with other treatment studies. The limitations of the current study and suggestions for future research are discussed.

Separation Anxiety Disorder

Separation anxiety disorder (SAD) is defined by excessive anxiety in response to real or threatened separation from the home or attachment figures (American Psychiatric Association, 1994). Studies indicate that between 1% (Ollendick & Mayer, 1984) and 8% (Hersov, 1985) of children experience SAD. Research documents the negative impact of anxiety on academic performance (Dweck & Wortman, 1982) and social adjustment (Strauss, Lease, Kazdin, Dulcan, & Last, 1989). Studies have also pointed to the long term implications of anxiety. In particular, childhood anxiety has long term implications for adult functioning (Kendall, 1992). A considerable number of adults with anxiety disorders report experiencing separation anxiety or general anxiety symptoms as children (Last, Hersen, Kazdin, Francis, & Grubb, 1987; Last, Phillips, & Statfeld, 1987; Weissman, Leckman, Merkiangas, Gammon, & Prusoff, 1974). Given the relationship between childhood anxiety and adult psychological distress, it is critical to address these issues in childhood (Gittelman, 1986).

In recent times, researchers have investigated the effectiveness of cognitive-behavioural and family cognitive-behavioural interventions in the treatment of anxiety disorders such as SAD. Cognitive behavioural theories and CBT studies of childhood anxiety are discussed below. Given that the core symptoms, prevalence, age of onset, associated symptomatology, major etiologies and treatments of SAD were discussed in detail in Research Project 2, these issues are not discussed here.

Cognitive-Behavioural Theories of Anxiety

As discussed in Research Project 2, cognitive-behavioural theory holds that the individual does not respond directly to their environment (Kendall & Gosch, 1994). Rather, the individual's response is mediated by cognitive processes, with different situations producing different responses depending on the individual's thought content

and cognitive processing style. Anxiety is proposed to result from dysfunctional cognitive processing, such as cognitive deficiencies or cognitive distortions. Anxious children's cognitions have indeed been found to be an important part of the assessment and treatment process (Morris & Kratochwill, 1983).

Cognitive-Behavioural Treatment of Anxiety

In recent times, cognitive-behavioural treatments of childhood anxiety, combining behavioural techniques (e.g., in vivo exposure, relaxation and contingency management) with cognitive coping skills (e.g., self instructional training) have been evaluated. However, the majority of investigations have focused on night time fears, school fears and fears of medical procedures (Dadds, Heard, & Rapee, 1991; Kendall et al., 1992). Few studies have examined the effectiveness of CBT approaches in the treatment of general anxiety disorders, such as separation anxiety disorder.

One randomised treatment study of general anxiety disorders in children found that CBT intervention was superior to a wait list control condition, with improvement maintained at 12 month follow up (Kendall, 1994). In this study, 27 children with a diagnosis of either overanxious disorder, SAD or avoidant disorder were taught a range of CBT skills over 16 sessions. Techniques included developing realistic expectations, relaxation training, modelling, exposure, developing coping self talk and self evaluation. Findings indicated that 66% of children in the CBT treatment group did not meet criteria for their pre-treatment anxiety disorder at post treatment and were within normal limits with respect to other measures of psychopathology. For instance, scores on the Child Depression Inventory, the CBCL internalising scale and CBCL social scale were all within normal limits at post treatment and follow up.

A particular issue raised by Kendall (1994) in the treatment of SAD was the involvement of parents in the treatment of anxious children. Whilst little research has

addressed this issue, indirect evidence points to the importance of the family in the development of childhood anxiety. For instance, genetic transmission studies indicate that a familial loading is apparent for adult anxiety disorders (Rutter et al., 1990). Anxious children are also more likely to have parents with anxiety problems (Last, Hersen, et al., 1987; Rutter et al., 1990). Studies also suggest that negative feedback and parental restriction are related to childhood anxiety (Krohne & Hock, 1991). Family processes have also been found to encourage avoidant responses in anxious children (Barrett, Rapee, Dadds, & Ryan, 1996).

Very few studies, however, have evaluated parental involvement in the treatment of children with anxiety disorders such as SAD. One such study was that of Barret, Dadds and Rapee (1996) who evaluated a family based intervention for childhood anxiety. In this study, 79 children aged 7 to 14 who met diagnostic criteria for SAD, overanxious disorder or social phobia were randomly allocated to one of three treatment conditions: CBT, CBT plus family management, and wait list control. For the CBT child treatment condition, an Australian adaptation of Kendall's CBT program (Coping Cat Workbook, Kendall, 1990) was used. This workbook included recognising anxious feelings, cognitive restructuring, self talk, self evaluation and reward. The first four sessions for children in the CBT child treatment condition involved the teaching of anxiety management procedures (e.g., relaxation training, coping self talk in anxiety provoking situations). For the remaining eight sessions, children practiced the previously learned coping skills in in vivo situations, beginning with low anxiety provoking situations and increasing to highly anxiety provoking situations.

For children in the CBT plus family management group, the child and parents had a family anxiety management (FAM) therapy session after the child completed each of the Coping Koala sessions. Parents were trained in how to reward courageous behaviour

and extinguish excessive anxiety in the child. Parents were taught reinforcement strategies such as verbal praise and privileges, contingent upon facing feared situations. Planned ignoring was used to deal with excessive complaining. Parents were trained to listen and respond empathically to the child's complaint the first time it occurred, however, when repetitions occurred, parents prompted the child to adopt a coping strategy. Parents were also taught how to cope with their own emotional upsets. Brief communication training was also conducted with parents. Parents were taught to respond appropriately to conflict (i.e., reduce inter-parental conflict over child-raising issues, being consistent with each other in dealing with the child's anxious behaviour) encouraged to set aside time each day for discussions about each other's day, and schedule weekly problem solving discussions to assist in the management of child and family problems. Brief training in listening skills and problem solving skills was provided. The family anxiety management training was completed in 12 sessions.

Results of this study indicated that across treatment conditions, 69.8% of children no longer met diagnostic criteria for an anxiety disorder, in comparison with 26% of the wait list controls. At 12 month follow up, 70.3% of the children in the CBT group and 95.6% of the children in the CBT + FAM group did not meet criteria for an anxiety disorder. Children in the CBT + FAM were reported to be functioning better overall than children in the CBT group at 12 month follow up. Children in the CBT + FAM group were also more able to deal with difficult situations, had lower maternal and paternal internalising scores on the Child Behaviour Checklist (CBCL; Achenbach & Edelbrock, 1983), and lower scores on the Children's Depression Inventory.

In an Australian study, Barrett (1998) evaluated the effectiveness of cognitive-behavioural group treatments for childhood anxiety. In this study, 60 Australian children aged 7 to 14 years who met diagnostic criteria for SAD, overanxious disorder or social

phobia were randomly allocated to three treatment conditions: group CBT (GROUP CBT); group CBT plus family management (GROUP-FAM) and wait list (WL). Results indicated that across treatment conditions, 64.8% of children no longer met diagnostic criteria for an anxiety disorder at post-treatment in comparison with 25.2% of children in the WL condition. At 12 month follow up, 64.5% of children in the GROUP-CBT group and 84.8% of children in the GROUP-FAM group did not meet criteria for any anxiety disorder. Children in the GROUP-FAM group were reported to be functioning better overall than children in the GROUP-CBT group at 12 month follow up. Children in the GROUP-FAM group were also more able to deal with difficult situations, and had lower maternal and paternal internalising scores on the Child Behaviour Checklist at follow up (CBCL; Achenbach & Edelbrock, 1983).

Howard and Kendall (1996) also demonstrated the effectiveness of cognitive-behavioural family therapy intervention with six children aged 9 to 13 years. In this study, all children diagnosed with a childhood anxiety disorder were treated with 18 sessions of family based cognitive-behavioural therapy. Therapy was evaluated using assessments from multiple sources and a multiple baseline (2, 4 and 6 weeks) across cases design. Results indicated that post treatment, three of the six children no longer met criteria for their pre-treatment anxiety disorder. At four month follow up, four of the six children no longer met diagnostic criteria for their pre-treatment anxiety disorder. All six children had CBCL Internalising scores within the normal range at post treatment. Parental reports of the level of covert or overt marital conflict, however, did not change following treatment.

In sum, several studies have supported the use of CBT and CBT plus family therapy in the treatment of SAD symptomatology. Although CBT interventions have been found to maintain normal levels of social functioning at post treatment and follow

up (Kendall, 1994), no studies have incorporated social skills training in the treatment of SAD children with significant social problems. The current study, therefore employed a CBT family approach in the treatment of a ten year old boy with separation anxiety disorder based on the empirical support for the family CBT treatment of anxiety disorders such as SAD (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Howard & Kendall, 1996; Kendall, 1994). The current study also incorporated social skills training in the treatment process, given that no other studies have done so, and that the participant was found to experience associated social problems. On the basis of family CBT studies of SAD, it was hypothesised that the subject's separation anxiety would decrease following a CBT family treatment approach. It was also hypothesised that the participant's social problems would decrease following treatment.

Method

Participant

The following case was referred to the Royal Children's Hospital, Mental Health Services for Kids and Youth (MHSKY), North West Team. A University of Ballarat doctoral student on placement at MHSKY was supervised by a clinical psychologist, to undertake assessment and treatment of the following case.

Reason for Referral

The ten-year old male participant was referred to MHSKY by his mother for psychological assessment and treatment. The participant's mother reported that he had been experiencing extreme fear of separation from attachment figures since attending a school camp, two months prior to the initial assessment session. Since returning from the camp, the participant had expressed concern that harm would befall his parents, particularly his mother. He became extremely distressed, angry and aggressive toward his siblings when separated from his parents. Following separation from attachment figures, the participant would constantly check the clock, awaiting their return. He had difficulty attending school, and was reportedly teased by his peers about his fear of being away from his mother. The participant reported a history of being bullied at school.

Background Information

The subject (10 years) was the eldest of three children. He had one younger sister (8 years of age) and one younger brother (4 years of age). All three children resided with both parents in Pascoe Vale, Melbourne.

The subject was reported to be a clingy, sensitive and lonely young child. He was described by his parents as "a bit of a loner". The participant had a history of being bullied at school, beginning in grade prep. The participant was reported to experience some anxiety when first beginning school, requesting that his mother visit him at

lunchtime. The participant had recently been worried about the death of his grandfather, despite his grandfather's health. Prior to the subject's first school camp, the participant attended a funeral of a distant relative. The participant reported that he began to think about death and dying as a result of the funeral and did not wish to attend the school camp the following day. Whilst on the school camp, the subject became very homesick. He reported that he thought about the funeral, about his grandfather dying and being away from his mother. He began to cry, requested to call his parents several times, and was unable to sleep. The children on the school camp teased the subject for becoming upset, and called him an "idiot" and a "cry baby". They told him that his mother wouldn't pick him up from school camp, and that he would "never see her again". When the participant returned from camp, his mother was late to pick him up. This resulted in a significant increase in the subject's level of anxiety over the following three weeks. He refused to be separated from his mother, and difficulty attending school. The participant indicated that he had recently had difficulty concentrating at school as his mind often wandered to thoughts concerning the whereabouts of his mother.

Procedure

A total of twelve sessions were held at the MHSKY North West department of the Royal Children's Hospital, conducting psychological assessment (four sessions) and treatment (eight sessions), with the participant and his family. Weekly sessions were conducted over a five month period, between February and June 2001.

Assessment Process

A total of four weekly sessions were spent conducting psychological assessment with the participant, his mother and father, and brother and sister. All family members attended the first two-hour assessment session. Information about the presenting problem (e.g., how often the problem occurred, when the behaviours began, what situations provoked the behaviour) was obtained. Background information regarding the family (e.g., family constellation, family attitudes to presenting problem) was discussed, and the subject's pre-natal, developmental, and medical history was obtained. The participant's academic progress and social functioning was also discussed.

The second assessment session was spent with the subject's parents, conducting a semi-structured clinical interview, based on the Anxiety Disorders Interview Schedule for Children, Parent Version (ADIS-P; Silverman & Albano, 1996). To gather further information about the participant's separation anxiety, and co-morbid social problems, the subject's parents completed the DSM-IV Symptom Checklist for SAD and the Child Behavior Checklist (Achenbach & Edelbrock, 1983).

The DSM-IV Symptom checklist for SAD includes all eight DSM-IV diagnostic criteria for the disorder. Questions are rated on a scale from 0 (not at all) to 3 (very much). Items scored as 2 or 3 are regarded as meeting diagnostic criteria. The DSM-IV requires that a minimum of three of eight symptoms be present for at least four weeks, resulting in significant impairment in functioning, for diagnosis to occur. Similarly, the DSM-IV Symptom Checklist for ODD includes all eight diagnostic criteria. Questions are also rated on a scale from 0 (not at all) to 3 (very much). Items scored as 2 or 3 are regarded as meeting diagnostic criteria. The DSM-IV requires that a minimum of four of eight symptoms be present for at least four weeks, resulting in significant impairment in functioning, for diagnosis to occur. This rating scale is similar to other new DSM-IV

AD/HD and ODD rating scales (Du Paul, Power, Anastopoulos, Reid, McGoey, & Ikeda, 1997; Gomez, Harvey, Quick, Scharer, & Harris, 1999). Whilst the psychometric properties of this scale are yet to be documented, similar scales such as the DSM-IV AD/HD Rating Scale have produced adequate test-retest reliabilities and concurrent validity statistics (Gomez et al., 1999).

The Child Behaviour Checklist (CBCL; Achenbach & Edelbrock, 1983) is a parent-completed multidimensional instrument assessing a range of childhood psychopathology symptoms. The CBCL is designed for use by parents of children aged 4 to 16 years. One hundred and twelve items are scored as either 0 (Not True), 1 (Somewhat or Sometimes True) or 2 (Very True or Often True). On the basis of parental responses, eight clinical scales regarding specific childhood diagnostic categories are derived, including 1) withdrawal, 2) somatic complaints, 3) anxiety/depression, 4) social problems, 5) thought problems, 6) attention problems, 7) delinquent behaviour and 8) aggressive behaviour. The teacher version of the CBCL (The Teacher Report Format; TRF) also produces scores on such scales. Responses made on the Child Behaviour Checklist resulting in T-scores greater than two standard deviations above the mean (i.e., T-scores of 70 and above) are indicative of clinically significant problems. T-scores of 67-69 are considered to reflect problems that are at the 'borderline' level.

The CBCL is a widely used tool. Several studies have reported data supporting the concurrent and construct validity of the CBCL. It has been found to correlate significantly with other childhood rating scales such as the Conners Parent Rating Scale, Revised Behaviour Problem Checklist, Teacher Report Form and Youth Self-Report Form (Achenbach & Edelbrock, 1983). Evidence also supports the discriminant validity of the CBCL. The scale has been found to discriminate clinic from non-referred children

(Achenbach & Edelbrock, 1983; Breen & Barkley, 1988) and hyperactive from normal children (Barkley, 1981).

The third assessment session involved obtaining background information about the families of origin for the subject's mother and father, and a familial psychological history. The participant's father reported that he came from a stable family home, and was close to his father and mother. He reported that he was himself a sensitive and very anxious child, who took things to heart. To conceal his anxiety, the subject's father said he put up an angry, tough front. The participant's mother reported that she came from a home characterised by many separations. Her parents separated when she was 10 years of age, after which time she lived with her grandparents, her mother, and then finally, her father. As a result of her childhood, the subject's mother reported that she was a very independent child, who learned to deal with problems swiftly from an early age. She reported that she did not "dwell on problems, she "just got on with things". Both of the participant's parents reported that they became very frustrated in response to his anxious behaviour. His mother indicated that she could not understand why her son could not solve his problems quickly and swiftly as she did when she was a child. His father believed that his son should develop a "tougher" and "less sensitive" nature.

The fourth assessment session was spent with the participant. A brief semi-structured interview was conducted in which criteria for SAD were discussed. The child's social functioning was also assessed. The participant was asked to list three wishes, and draw his family. The participant's relationship with his parents was discussed. The subject reported having difficulty talking to his parents about his worries and concerns, and was therefore reluctant to do so. He feared they would not understand his feelings, as they often "yelled" at him for becoming upset. The subject said he did not

discuss his anxious feelings with his parents, but would become angry and upset with his siblings.

Assessment Results and Diagnosis

Results of the assessment process indicated that the participant met diagnostic criteria for SAD. The participant also experienced clinically significant anxiety/depressive behaviour and social problems as indicated by parent ratings on the CBCL. Although some aggressive and oppositional behaviour was reported at home, this did not reach clinical significance on the CBCL.

Separation Anxiety Disorder

The subject was diagnosed with SAD on the basis of the semi-structured interviews, and parental responses on the DSM-IV Symptom Checklist for SAD. On the DSM-IV Symptom Checklist for SAD, all eight SAD symptoms were rated as present. These included: 1) experiences recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated (SEPARATION); 2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures (LOSING); 3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped) (UNTOWARD); 4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (SCHOOL); 5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant attachment adults in other settings (ALONE); 6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (SLEEP), and; 7) repeated complaints of physical symptoms, such as headaches, stomachaches, nausea, or vomiting, when separation from major attachment figures occurs or is anticipated

(PHYSICAL), and; 8) ‘experiences repeated nightmares involving the theme of separation’ (NIGHTMARES).

A semi-structured interview with the child confirmed the presence of SAD symptomatology, such as a fear of being separated from his mother, harm befalling her (e.g., she will have a car crash), reluctance to go to school and repeated nightmares involving separation. For example, the subject indicated that he often dreamt of his parents running away from him, and of him finding them dead sometime later. On the CBCL, the subject was rated by his parents as experiencing significant anxiety/depressive behaviour (T = 78).

Social Problems

Significant social problems were evidenced by parental reports on the CBCL (T = 75) and semi-structured interviews with the parents and participant. Both parties indicated that the participant had been bullied at school since grade prep. The subject stated that children often teased him, and that he was picked last for games. The participant said that he did not have many friends, that he often played by himself at lunchtime and that he had received “death threats” from children in the neighbourhood. The participant said he had trouble sticking up for himself, and did not know how to respond in situations where he was teased.

Following the assessment process, a feedback session was held with the participant, his mother and father, and his two younger siblings. The family was informed of the diagnosis (SAD) and co-morbid conditions (e.g., social problems, anxiety/depressive symptoms). Predisposing, precipitating and perpetuating factors were discussed. For instance, the subject’s sensitive nature and difficulty separating from his mother from an early age, as well as a paternal history of anxiety may have predisposed his condition. The subject’s attendance at the funeral prior to school camp, and the

absence of the subject's mother upon his return from school camp, led to a significant increase in the subject's anxiety. These factors precipitated the referral. The subject's reluctance to discuss his anxiety with his parents, and their subsequent frustration and poor listening skills may have been perpetuating the condition. This feedback session also involved the discussion of treatment goals and strategies. Treatment goals included the reduction in the level of the subject's anxiety regarding separation from his mother, increased communication between the subject and his parents, and an increase in the subject's assertive behaviour (to reduce social problems). Strategies to achieve these goals included individual cognitive behavioural therapy to reduce the subject's separation anxiety, and increase assertiveness, and family sessions to facilitate communication between the subject and his parents. The treatment process is discussed in more detail in the following section.

A two week break for school holidays preceded the beginning of treatment. Prior to the implementation of the treatment process, the parents completed the CBCL and the DSM-IV Symptom Checklist for SAD (pre-treatment measures). These measures were also completed after the final treatment session (post-treatment measures).

Treatment Approach

A total of eight treatment sessions were conducted on a weekly basis. Three individual cognitive-behavioural therapy (CBT) sessions were conducted to reduce the participant's SAD symptomatology. One individual social skills training session was held to improve the participant's social skills. Three sessions were spent with the family to increase communication and decrease the participant's SAD symptomatology, and one session was spent terminating therapy. Each of these components of the treatment process are discussed below.

Individual CBT Sessions

Sessions one to three involved the implementation of cognitive-behavioural techniques to reduce the subject's level of separation anxiety, based on Kendall's Cognitive-Behavioural Treatment program (Coping Cat Workbook; Kendall, 1990) for childhood anxiety disorders. In session one, the therapist and the participant discussed the subject's anxious behaviour. He was asked to identify symptoms of anxiety (e.g., heart pounding, palms sweating, etc.). The subject indicated that his hands shook and his heart beat quickly when he was anxious. His face also became flushed. The subject identified situations in which he became anxious. These included when his mother left the house, when he was being picked up from school and at lunchtime when he was often bullied. Relaxation techniques were also introduced in this session. For instance, the subject was instructed on how to breathe deeply and slowly. For homework, the subject was instructed to practice relaxing at least three times during the week. In session two, the subject was taught to recognise self-talk during anxious situations and replace maladaptive cognitions with more adaptive cognitions. For example, the subject indicated that when his mother left the house he became very anxious, thinking that she would have a car accident and die. This thought was challenged. The subject verbalised that it was most unlikely that his mother would die in a car accident. He understood that "she had to go out and do things", and that she would return. He was able to replace his maladaptive cognition (i.e., mum will have a car accident and die) with more rational cognitions (i.e., mum will be fine, she has not had a car accident before, she will be back soon). For homework, the participant was asked to record one anxiety provoking situation during the weeks and his thoughts at the time. In session three, his homework was discussed, and the subject was assisted to replace irrational thoughts with more rational thoughts. Problem solving techniques were also introduced. The therapist and

the subject discussed several techniques such writing down on a piece of paper how he was feeling. Self evaluation and reward was also introduced in this session. The subject indicated that he would allow himself to draw for one hour after successfully dealing with anxiety provoking situations.

Social Skills Training

Social skills training was conducted in session four. Given that the participant had a long history of bullying, and reported being unable to stand up to his peer, assertiveness training was conducted. The therapist modelled appropriate assertive behaviour. For example, the therapist showed the subject how to walk and stand in an assertive manner (e.g., shoulders back, head up, keeping eye contact), as well as how to speak in an assertive tone. The subject practiced walking, standing and talking in an assertive manner. The subject was videotaped during this task to provide feedback about his behaviour. The therapist and the participant role-played several socially challenging situations. The participant was assisted to respond to threats and bullying in a calm and assertive manner. For homework, the subject was instructed to practice these techniques at home, and at school.

Family Sessions

Sessions five to seven were family sessions to increase communication between the subject and his parents and to assist in the reduction of the subject's separation anxiety using graded exposure. In session five, the skills learned by the subject in sessions one to four were discussed with the family. The subject's parents were trained in this session to reward courageous behaviour (i.e., through verbal praise, privileges, tangible rewards). The subject's mother was also instructed to be deliberately late to pick him up from school during the week, so that he could practice his previously learned anxiety management skills. In session six, the subject's parents were trained to adopt more

effective listening and communication skills. In this session, the subject discussed an anxiety-provoking situation (i.e., being bullied at school) with his parents. His mother and father were coached to listen to the subject and acknowledge his feelings before suggesting a solution to the problem. The therapist modelled appropriate responses where necessary. The family was instructed to practice these techniques at home during the week. Session seven was an extension of session six, with effective communication skills again the focus of the session. The family role-played another anxiety provoking situation for the subject (i.e., the health of his grandfather). The subject's parents were instructed to find out more about his anxious feelings, as opposed to asking 'why' questions and providing solutions. The therapist modelled open and opposed to closed questions and the use of an appropriate tone of voice. The termination of therapy was discussed in session seven. The family was instructed to continue to practice these techniques at home. In session eight, treatment gains were reviewed. Strategies that the family found helpful during therapy were discussed and reviewed, and therapy was terminated.

Results

Table 1 shows that at pre-treatment, all eight SAD symptoms were present. These included SEPARATION, LOSING, UNTOWARD, SCHOOL, ALONE, SLEEP, PHYSICAL and NIGHTMARES. At post-treatment, two symptoms were present. These included PHYSICAL and SEPARATION.

Table 1

Number of DSM-IV SAD Symptoms and CBCL scores at Pre-Treatment and Post-Treatment

	Pre-Treatment	Post-Treatment
Number of DSM-IV		
Symptoms:		
SAD	8	2
CBCL:		
Anxiety/Depressive	79*	67
Social Problems	78*	65

Note. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; SAD = Separation Anxiety Disorder; CBCL = Child Behavior Checklist; * = clinically significant level (based on at least 2 standard deviations above the normative mean)

Inspection of Table 1 also indicates that at pre-treatment, CBCL Anxiety/Depressive behaviour was clinically significant ($T = 79$). At post-treatment, this behaviour reduced to a non-significant level ($T = 67$), however, this score is in the borderline range. Table 1 also shows that at pre-treatment, CBCL Social Problems were clinically significant ($T = 78$). At post-treatment, CBCL social problems reduced to a non-significant level ($T = 65$).

Discussion

On the basis of research attesting to the effectiveness of CBT family interventions in the treatment of anxiety disorders, including SAD (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Howard & Kendall, 1996; Kendall, 1994), it was hypothesised that the participant's SAD symptomatology would reduce following treatment. Given that the treatment approach also included social skills training, it was hypothesised that the subject's social problems would reduce following treatment.

The hypothesis that SAD symptoms would reduce following treatment was supported by the current findings. At pre-treatment, the participant's parents endorsed the presence of all eight DSM-IV SAD symptoms. These included SEPARATION, LOSING, UNTOWARD, SCHOOL, ALONE, SLEEP, PHYSICAL, and NIGHTMARES. At post treatment, only two symptoms (SEPARATION and PHYSICAL) were present, indicating that the participant no longer met criteria for SAD. In addition the participant's anxiety/depressive score on the CBCL had reduced to a non-significant level ($T = 67$). The finding that the participant no longer met criteria for his pre-treatment anxiety disorder is consistent with previous CBT and family CBT treatment studies of childhood anxiety (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Howard & Kendall, 1996; Kendall, 1994). For instance, in the Kendall (1994) study, 95.6% of children did not meet criteria for any anxiety disorder 12 months after receiving CBT treatment. Similarly, in the Barrett (1998) study, 84.8% of children in the GROUP-FAM group did not meet criteria for any anxiety disorder following treatment. The finding that the participant's level of anxiety/depression on the CBCL decreased following treatment is consistent with findings from other treatment studies that have reported reductions in CBCL internalising scores following family CBT treatment (Barrett, 1998; Barrett et al., 1996).

It is noted however, that whilst only two SAD symptoms were present at post treatment, the subject continued to experience excessive distress and physical complaints following treatment. In addition, whilst the participant's level of overall anxiety and depression on the CBCL reduced following treatment, this score was within the borderline level. These findings may be the result of a number of factors. For instance, it is possible that the brief nature of the treatment in comparison with other treatment studies may have precluded the total remission of anxiety when separated from attachment figures. Indeed, in the family CBT treatment studies of Barrett (1998) and Barrett et al. (1996), children received 12 sessions of CBT based on Kendall's Coping Koala Workbook (Kendall, 1990) and 12 sessions of family anxiety management. In the current study, three sessions were allocated to the individual CBT component. Systematic desensitisation was not introduced in the current study. In addition, only three sessions were allocated for the family anxiety management training.

The hypothesis that the participant's social problems would reduce following treatment was supported by the findings. At pre-treatment, the subject was rated by his parents as experiencing significant social problems on the CBCL social scale. At post-treatment, the participant's social problems had decreased to a non-significant level on the CBCL. This finding is consistent with previous research (Kendall, 1994) in which children's social problems were within normal limits following CBT treatment for anxiety disorders.

Taken together, these findings indicate that family CBT treatment in conjunction with social skills training was effective in the reduction of separation anxiety disorder symptomatology and social problems for this particular case study. These findings have several implications for the assessment and treatment of SAD. With respect to the assessment of SAD, these findings indicate that an understanding of the contribution of

the family members to the child's anxiety should be determined. The clinician should also gain a clear understanding of the cognitions of the SAD child that contributing to their current presentation, as well as a comprehensive history of social problems and depressive symptoms. This assessment may assist in guiding the treatment process. The current findings highlight the importance of familial involvement, cognitive-behavioural techniques and social skills training in the treatment of children with SAD.

Despite the success of the current treatment study, several limitations must be recognised. First, this study employed a single case design. Generalisation of the current findings, therefore, beyond other 10 year old males, is difficult. Future randomised clinical trials of children with SAD are required to evaluate the effectiveness of family CBT interventions in the treatment of childhood anxiety. Second, as discussed, in comparison with other treatment studies (Barrett, 1998; Barrett et al., 1996), the current treatment approach was brief in nature. Only three individual CBT sessions were conducted with the participant for the reduction of SAD symptomatology. As such, systematic desensitisation was not included as part of the treatment program. In addition, only three sessions were spent conducting family anxiety management and one session spent conducting social skills training. In the studies by Barrett (1998) and Barrett et al. (1996), 12 individual CBT sessions and 12 family anxiety management sessions were conducted. The brief nature of the current study may have precluded the total reduction of SAD symptomatology at post treatment, and thus served as a limiting factor. Third, follow up data could not be obtained for the participant in the study. Whether treatment gains were maintained following treatment, therefore, could not be determined.

In conclusion, the current study provided support for a brief family CBT approach in conjunction with social skills training for the treatment of SAD symptomatology and associated social problems. Future clinical trials of groups of children with SAD,

however, are required to advance our understanding of the most effective treatment approaches for these children. Where possible, family CBT studies should include 12 individual CBT sessions and 12 family anxiety management sessions to achieve maximum treatment gains. These studies should also aim to obtain follow up data in order to provide a comprehensive evaluation of the treatment process.

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THEMATIC EVALUATION OF RESEARCH PROJECTS 1, 2 AND 3, AND
PROFESSIONAL AND ETHICAL ISSUES IN CLINICAL RESEARCH

Research Project 4

1. Introduction

The three research projects I conducted during my clinical placements had several common elements. All projects were single case studies that included comprehensive multi-source multi-method childhood assessment and cognitive-behavioural or behavioural treatment approaches. This research project (Research Project 4) is divided into four parts. The first part will discuss these commonalities of the Research Projects 1, 2 and 3. The second part will discuss professional and ethical issues relevant to these research projects such as confidentiality, informed consent and competence. The third part of this report will discuss the use of empirically supported treatments in clinical practice. The fourth part of this chapter is a conclusion section.

2. Part 1. Commonalities Among the Three Research Projects

2.1 Single Case Experiments

Case studies and single case designs are experiments with one subject (Kazdin, 1998). A case study involves the intensive examination of an individual in which information is richly detailed in narrative form, as opposed to scores on dependent measures (Kazdin, 1998). Single case experiments, however, are generally more rigorous than case studies. Single case designs facilitate an understanding of causal relations. The effectiveness of interventions can be inferred by comparing different conditions presented to the same participant over time (Kazdin, 1998). The key characteristics of the single case experiment include continuous assessment, baseline assessment, stability of performance and the use of different phases (Kazdin, 1998). Continuous assessment is the most important design requirement of a single case experiment, and refers to the use of repeated observations of performance over a specific time period. Performance is usually observed before the intervention and on multiple occasions throughout the treatment (e.g., daily or weekly basis). Gathering pre-treatment information over a period of time allows

the researcher to examine functioning without the intervention (Kazdin, 1998).

Assessment during the intervention allows the researcher to determine whether changes in dependent measures are a function of intervention. Baseline assessment refers to the initial period of assessment prior to the implementation of the intervention. The purpose of the baseline phase is to describe current performance and predict how the individual is likely to function in the immediate future.

Stability of performance refers to performance in which there is little variability over time (Kazdin, 1998). Excessive variability or a slope in the data (e.g., during baseline or other phases) can interfere with drawing conclusions about treatment. The use of different phases is also a key characteristic in single case experiments. Phases refer to time periods (e.g., days, weeks) in which a particular condition (e.g., intervention, baseline) is implemented and data are collected. The purpose of using different phases is to examine whether functioning continues in the expected pattern from a prior phase, or changes when the intervention is altered or other conditions are changed. The pattern of the data across the phases is examined to draw inferences (Kazdin, 1998). An example of the use of different phases is the ABAB design. In this design, two phases are repeated over time. These include the baseline (A phase), and the intervention (B phase). The A and B phases are repeated to complete the four phases. If performance improves during the first intervention phase, declines when the treatment is withdrawn, and improves when treatment is readministered, the effects of the intervention are clear.

The three research projects that I conducted were all single case studies in which one participant was subjected to a treatment condition over time. In Research Project 1, the child's AD/HD and ODD behaviour was the target of a 10 step parent training intervention. In Research Project 2 the participant was the focus of seven sessions of cognitive-behavioural therapy (CBT) for Separation Anxiety Disorder (SAD). In

Research Project 3, the subject participated in family CBT and social skills training for the treatment of SAD and associated social skills problems. However, although the three research projects are examples of single case designs, each lacked several key criteria for single case experiments, such as especially baseline assessment and the use of different phases. For instance, time constraints precluded the collection of baseline data for all research projects. In Research Project 2, for example, whilst the collection of baseline data over a significant period of time would have provided more information about the extent of the child's problem, the child's mother was keen for her daughter to begin treatment and did not want to wait. Thus, the collection of baseline data in this case may have been unethical. However, the collection of baseline data in this case may have revealed that the child's behaviour problems were extreme and persistent over a long period of time. As such, I may have been more aware that brief CBT (i.e., 7 sessions) may not have been sufficient to produce significant change in SAD symptomatology for this child and have investigated other treatment approaches.

The three research projects also failed to implement different phases. The use of an ABAB design may have been useful for Research Project 3, for example, to determine whether improvements in SAD and social skills problems were strongly related to the treatment process. For this research project, however, a 2 week break for school holidays resulted in no therapeutic contact for this time. The child's mother reported that his behaviour worsened following this period of no contact compared with his behaviour following treatment sessions, thereby supporting the effectiveness of the intervention, despite the use of an ABAB design.

Although baseline data was not collected and different phases were not used for the research projects, continuous assessments were conducted. That is, pre-treatment and post-treatment measures were obtained. For instance, in Research Project 1, the child's

behaviour was rated on the DSM-IV AD/HD and ODD Symptom Checklists and the Home Situations Questionnaire at pre-treatment, post-treatment and one month follow up. In Research Project 2 the child's behaviour was rated on the DSM-IV Symptoms Checklist for SAD and the eight clinical scales of the Child Behaviour Checklist at pre and post treatment. Similarly, for Research Project 3, the child's behaviour was rated on the DSM-IV Symptoms Checklist for SAD and the eight clinical scales of the Child Behaviour Checklist at pre and post treatment.

2.2 Multi-Source Multi-Method Assessment

Multi-source, multi-method assessment is required to capture the situational variability of childhood disorders such as AD/HD and SAD, as well as their associated conditions. As discussed in chapter 1 of the major thesis, Cantwell (1996) has outlined a six-step approach in the assessment of AD/HD. This assessment approach may also be applied to the assessment of SAD. The first step involves an interview with the child's parents in order to determine the child's major symptoms, and an indication of when, where and with whom these symptoms occur. A developmental, medical, school and family history should also be obtained. The second step involves a developmentally appropriate interview with the child, gaining insight into their view of symptoms, awareness of any difficulties, and the presence of any other comorbid conditions. Third, a medical examination may be required to determine the health status of the child and screen for sensory deficits, neurological problems or other physical explanations for the symptoms. Fourth, cognitive assessment of ability and achievement should be undertaken where appropriate. The fifth step involves gathering data from parents and teachers using broad band rating scales such as the Child Behaviour Checklist (CBCL; Achenbach, 1991a, Achenbach, 1991b) and more narrow rating scales such as the DSM-IV AD/HD Rating Scale (Gomez, Harvey, Quick, Scharer, & Harris, 1999) and the DSM-IV

Symptom Checklist for SAD. A clinical interview, such as the Anxiety Disorders Interview Schedule (Silverman & Albano, 1996), assessing a range of childhood disorders may also be conducted with parental figures. Lastly, Cantwell (1996) recommends assessments of other problems such as speech and language, and evaluation of fine and gross motor skills, where appropriate.

Following a comprehensive assessment, a diagnosis is formulated. Consideration is given to predisposing, precipitating, and perpetuating factors. This information may guide the treatment process.

The three research projects that I conducted included multi-source and/or multi-method assessment. For Research Project 1, in addition to obtaining a developmental, psychological and medical history, the child's mother and teacher completed the DSM-IV Symptom Checklists for AD/HD and ODD. The child's mother and teacher also completed the CBCL and the Conners Parent and Teacher Rating Scales. I conducted the Anxiety Disorders Interview Schedule (ADIS) with the child's mother and the WPPSI-R, the Matching Familiar Figures test, and a test of sustained attention with the child. For Research Project 2, a developmental, psychological and medical history were obtained from the child's mother. In addition, the child's mother and teacher completed the DSM-IV Symptom Checklists for SAD and ODD, and the CBCL. The ADIS was conducted with the child's mother and semi-structured interviews were conducted with the child and the child's teacher. For Research Project 3, family members were included in the assessment process. Family members provided information about the child's presenting problem, and the child's mother and father detailed the child's developmental, medical and psychological and school history. The ADIS was conducted with the child's parents, and the child's mother completed the DSM-IV Symptom Checklist for SAD and the CBCL. A semi-structured interview was conducted with the child, and one session was

spent with the child's parents discussing their families of origin and their feelings regarding their child's behaviour problems.

2.3 Behavioural or Cognitive-Behavioural Treatment Approaches

Behavioural treatments have been found to be effective for a variety of childhood disorders, such as AD/HD (Patterson, Chamberlain, & Reid, 1992), Conduct Disorder (Webster-Stratton, 1984), ODD (Barkley, 1987) anxiety disorders (Husain & Kashani, 1992) and pervasive developmental disorders (Pierce, & Schriebman, 1994). In the treatment of AD/HD and ODD in Research Project 1, parent training was implemented. PT is a form of behaviour modification emphasising the importance of consequences of behaviour. As discussed in Research Project 1, reinforcement is used to control non-compliant behaviour. Positive (e.g., praise) and negative (e.g., time out) reinforcement strategies are invoked. The parent training approach used in Research project 1 did not include any direct contact with the child. Rather, sessions were conducted with the child's mother teaching a range of social learning principles such as differential attention, effective commands, praise, tangible rewards, tokens for desired behaviour, use of mild punishment and contingency contracting. The goal of the treatment process was to reduce the child's AD/HD and ODD behaviour. This goal was achieved, given that the subject's inattentive, and non-compliant behaviour reduced considerably following treatment.

Whilst behavioural treatments have commonly been employed in the treatment of childhood anxiety disorders such as SAD (Thyer & Sowers-Hoag, 1988), research indicates that there is a cognitive component to childhood anxiety. For instance, as discussed in Research Project 2, thoughts relating to fear of evaluation by others are common in anxious children (Kendall, Howard & Epps, 1998). Very anxious children have more task-debilitating cognition during test taking, such as negative self evaluation, more off task thoughts and negative self speech (Prins, 1986). Cognitive-behavioural

treatment aims to correct maladaptive cognitive processes. Cognitive-behavioural treatments for childhood anxiety, especially those that include family members in the treatment process have been found to effectively reduce anxiety related symptoms (Barrett, Dadds & Rapee, 1996; Howard & Kendall, 1996; Kendall, 1994). In Research Project 2, CBT for SAD was conducted with the nine year old participant. The treatment was conducted over seven sessions and included predominantly cognitive techniques (i.e., correcting maladaptive thoughts), although relaxation procedures were introduced. The treatment did not produce significant changes in SAD symptomatology at post-treatment. It is possible that this child's cognitive processes were not sufficiently mature to use cognitive-behavioural techniques effectively. Indeed research shows that for children under 8 years of age, CBT may not be appropriate (Yule & Carr, 1990). In this case, the use of behavioural techniques such as systematic desensitisation may have been more effective. Nevertheless, in Research Project 3, family cognitive behaviour therapy was successful in reducing SAD symptomatology for the 10 year old participant.

3. Part 2. Ethical and Professional Issues for Research Projects 1, 2 and 3

Several ethical and professional issues are critical in clinical research. The Australian Psychological Society outlines these issues for psychologists in their Code of Ethics (APS, 2001). Issues of relevance to Research Projects 1, 2, and 3 include confidentiality and privacy, informed consent, and competency. These issues are discussed below.

3.1 Confidentiality and Privacy

Psychologists have a responsibility to respect the confidentiality of the clients with whom they work (Koocher & Keith-Spiegel, 1998). Psychologists are obliged not to discuss information about a client with others except under circumstances agreed to by both parties (Smith-Bell & Winslade, 1994). Invasion of privacy refers to the seeking of

information that is of a personal nature that intrudes upon the individual's view of privacy (Kazdin, 1998). This may include information regarding sexual practices, income, political views, religious beliefs or psychological behaviour. Individuals may vary according to what they perceive as an invasion of privacy. The use of psychological assessment measures raise concerns over invasion of privacy in clinical research. Results often reflect an individual's psychological adjustment, status and personality characteristic that maybe considered private. The participant's right to privacy may be protected in clinical research by ensuring anonymity and confidentiality (Kazdin, 1998). Anonymity refers to protecting the identity of the participant and their performance.

Confidentiality was ensured for all participants in each of the research projects. Clients were instructed during the first consultation that I was a probationary psychologist, and that information about the case would only be discussed with my placement supervisor at the time. None of the clients had any objections to this. To further protect the confidentiality of the clients, their names were not included in the research projects presented here. Although personal information was obtained from clients during the assessment process, clients were informed prior to the distribution of questionnaires about the nature of the items. Client's were also informed that they did not have to complete assessment instruments if they did not wish to. None of the client's objected to completing the rating scales.

Informed Consent

Psychologists are required to inform clients about a therapeutic intervention or using clients as research participants in language that is reasonably understandable to participants (Koocher & Keith-Spiegel, 1998). In general, informed consent implies that the individual a) has the capacity to consent, b) has been informed of significant information regarding the treatment or research, c) has freely expressed consent, and d)

consent has been documented. In Research Project 1, the child's mother was informed of the details of the assessment process, the parent training program and the research project, and asked if she wished to participate. The child's mother freely expressed consent to participate in the assessment, treatment and research project. Permission was also obtained from the child's mother to speak to the child's teacher. For Research Project 2, the child and her mother were informed in as much detail as possible about the assessment, the cognitive-behavioural intervention and the research project. The child was asked if she wished to participate in the treatment and she expressed consent. The child's mother also expressed consent for her child to partake in the assessment, treatment and the research project. Permission was also granted to speak to the child's teacher. For Research Project 3, the child and his family were informed of the assessment process, the treatment program and the research project. The family expressed consent for the assessment, treatment and research project. The child's consent to record his behaviour using a video camera during the social skills training was also obtained.

Competence

Competent psychologists recognise their strengths and skills, as well as their limitations (Koocher & Keith-Spiegel, 1998). Pope and Brown (1996) describe two types of personal competencies required for high quality for practice including intellectual competence and emotional competence. Intellectual competence refers to acquiring knowledge based on empirical research and the therapist's ability to assess, conceptualise, and plan appropriate treatments for a particular child. Emotional competence refers to the therapist's ability to tolerate clinical material that emerges during treatment, the capacity for self care, and the ability to detect personal biases in clinical work (Pope & Brown, 1996). For Research Project 1, the most appropriate interventions for children with AD/HD and non-compliant behaviour were researched. Evidence to support the use of

the parent training approach in Research Project 1 provided the rationale for the treatment program (Anastopolous, Shelton, Du Paul & Guevremont, 1993; Erhardt & Baker, 1990; Forehand & King, 1977; Paterson, 1982). Similarly, for Research Projects 2 and 3, the treatment strategies were implemented based on findings from several studies indicating the effectiveness of CBT (Kendall, 1994) and CBT family therapy (Barrett et al., 1996) for children with SAD. These treatments were also based on findings from the assessment process, and were tailored to the individual where appropriate. For instance, the child in Research Project 3 experienced significant social problems. Therefore, social skills training was incorporated into the treatment process. For each of the research projects, I was required to tolerate clinical information that emerged during the assessment and treatment stages. In cases where this information was distressing, appropriate supervision was sought.

Whilst ethical and professional issues such as informed consent, competence and confidentiality were adhered to by the therapist in Research Projects 1, 2 and 3, these issues also limited the implementation of the single case treatments. For instance, in Research Project 1, the child's mother did not wish to discuss the child's father or her history of depression. A respect for her privacy limited my understanding of perpetuating factors, and as such, a comprehensive treatment approach. Similarly, in Research Project 2, the child did not wish to discuss the death of a family member. This event, however, was described her mother as extremely traumatic for the child, and the child's disclosure about the accident may have helped to resolve underlying emotional issues. My own level of professional competence may have also limited the single case treatments. Given that I am a probationary psychologist, my skills regarding the implementation of the treatments may be limited. A therapist with greater experience may have recognised, for instance, that a behavioural approach or the inclusion of family members for the child

with SAD in Research Project 2, would have been appropriate. My ability to detect personal biases in clinical work, for instance, may have contributed to frustration I felt toward the child's mother in Research Project 1 who often referred to her son as an "ADD child", who "must" be "put on medication".

Whilst informed consent was obtained from participants in the current study, the degree to which participants understood what they were consenting to may be questionable. For example, although the children in all of the research projects were told of the assessment and treatment process, and asked whether this process was "OK" with them, it is unlikely that they fully understood the nature of the study. Further, parents of children may not fully understand exactly what they are providing consent for. In Research Project 2, for example, the child's mother consented for her daughter to undertake CBT for SAD, however, the degree to which the child's mother understood the nature of the therapy is unknown, despite it being explained in lay man's terms.

Respecting confidentiality limited my implementation of the single case treatments in these research projects because issues regarding treatment could only be discussed with a supervisor. Being able to discuss cases with colleagues and gain a range of opinions regarding the treatment process may have been useful. Issues regarding confidentiality, competence and informed consent may also affect the implementation of empirically supported treatments. Empirically supported treatments are discussed below.

4. Part 3. Empirically Supported Treatments

Although the interventions in the three research projects were based on empirically supported treatments, much debate has concerned whether empirically supported treatments are in fact superior interventions (Chambless, 1996). Empirically supported treatment include therapies that have been shown to be superior to a psychological placebo, pill, or another treatment (Ollendick & King, 1998). Results

supporting a well-established treatment must have been documented by at least two different investigators or teams of researchers. Characteristics of the clients must be specified and the clinical trials must be conducted with treatment manuals. Outcomes should also be demonstrated in controlled single case design studies or “good designs”. Good designs refer to studies in which it is reasonable to conclude that the changes were due to the treatment condition rather than change or confounding factors such as time (Chambless & Hollon, 1998). Well established treatments for AD/HD and ODD include behavioural parent training. Cognitive-behaviour therapy for anxiety disorders may be currently classified as “probably as opposed to “well established” efficacious” (Ollendick & King, 1998, p. 404). The use of well established therapies, however, have received much criticism. Ollendick (1999) noted three major concerns including 1) the use of “manually driven” treatment may stifle creativity and flexibility in the treatment process, and 2) treatments found to be effective in clinical trials and university based settings may not generalise to clinical practice settings. The use of treatment manuals in particular has come under scrutiny. Manuals have been viewed as “promoting a cookbook mentality” (Smith, 1995, p. 40), and “paint by numbers” (Silverman, 1996, p. 207). Others, however, have viewed the use of manuals more positively (Chambless & Hollon, 1998).

For all three research projects, treatment manuals were followed. As discussed, confidentiality and informed consent were provided. The use of a treatment manuals, however, limited the flexibility of the treatment process, and precluded the use of more appropriate therapeutic intervention. For example, in Research Project 1, Barkely’s (1987) 10 step treatment manual was followed. During the course of treatment, the child’s mother had difficulty implementing the token system of reward at home in this research project. As such, the effectiveness of this approach was limited. A more flexible treatment approach that was not based on a manual may have allowed for a

change in direction of the intervention (e.g., individual counselling for the child, family counselling). For Research Project 2, only half of Kendall's (1990) treatment manual could be followed due to time constraints. As such, systematic desensitisation procedures were not included in the treatment process (these procedures comprise the second half of the manual). A significant reduction in SAD symptomatology was not found in this study. A more flexible treatment approach would have been to emphasise behavioural strategies (i.e., systematic desensitisation) rather than cognitive strategies for this child. For Research Project 3, part of Kendall's (1990) treatment manual was followed. Sessions from the manual included the child anxiety management sessions in which the child was taught to identify anxious behaviour, challenge maladaptive thoughts and practice relaxation. Due to time constraints, however, the whole manual could not be implemented. The treatment approach for this research project was also more flexible, as family anxiety management and social skills training were also incorporated. Thus, for the three research projects, following a treatment manual in a step-by-step fashion was not appropriate.

5. Part 4. Conclusion

In conclusion, each of the research projects were single case designs in which a single subject was treated over time. Research Project 1 was a parent training approach for the treatment of AD/HD and ODD. Research Projects 2 was a CBT study for SAD, and Research Project 3 involved family CBT and social skills training for SAD and associated social problems. All projects incorporated multisource-multimethod assessments and involved either behavioural or cognitive-behavioural treatments. Ethical issues affecting the implementation of the single case treatments included confidentiality, informed consent and competence. These issues may also affect the implementation of

empirically supported therapies, however, the use of treatment manuals in particular is a limiting factor.

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