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Family Factors Associated with Anxiety in Children

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Abstract

The present study investigated the impact of the family environment to emotional and behavioural problems in children's lives. Various hypotheses were related to how the family environment differs for internalising and externalising problems in children, and in turn how the family environment related to the specific emotional disturbances of anxiety, depression and obsessive-compulsive disorder in children. Also, the role of the family environment as a moderator in the relationship between anxiety and depression.

A number of hypotheses related to obsessive compulsive disorder (OCD) were not able to be investigated in the present study due to small sample size. Included in these hypotheses were Rapoport's (1989) theorised developmental pathway of ritualisation in children and Kashani et al.'s (1992) theorised three subgroups of obsessive compulsive disorder. In addition, DSM-IV's theorised distinction between children that have, or do not have, insight into their obsessive-compulsive symptomatology. However, the hypothesis regarding the relationship obsessive-compulsive problems had with internalising and externalising problems were assessed in the present study. Other hypotheses included the relationship children experiencing anxiety, depression and obsessive-compulsive problems had to children's coping strategies. Coping strategies then, were also investigated in regard to their relationship with the family environment. Finally, significant life events were evaluated in terms of their relationship with anxiety and obsessive-compulsive disorder, while another hypotheses were related to coping strategies as a moderator in the relationship between anxiety and depression.

The sample consisted of seventy-two children and forty-nine parents, using a multitrait, multimethod battery of measures. Correlational analyses, including the use of multiple regression, indicated that the family environment was indeed related to internalising and externalising problems, as well as anxiety, depression and OCD in children. The family environment also moderated the relationship between anxiety and depression. In addition, findings indicated that OCD predicted externalising problems while anxiety predicted both internalising and externalising problems. The family environment was also found to relate to children's coping strategies, as was anxiety and OCD. Finally, anxiety and OCD were indicated to relate to significant life events. These results are

discussed in terms of other research literature, their implications for treatment and future research.

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To the man that makes my toes twinkle and smile crinkle. Your silent strength, unwavering love and attention have given me a firm path to walk on and the freedom to fly. Daniel I love you, admire you, and all that I do is in some part due to you. This thesis I dedicate to my Spunky.

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Mum, my soul mate. My only wish is that some day I will be the kind of woman you are to me. You taught me how to hold my hands up high and reach for the sun. Without the wisdom of your indomitable spirit I would not be writing this today. To Dad, thank you for the support and security you have always provided for me, I love you.

To all the children, I wish you safe journeys of discovery and wonderment. Should your light ever become shaded and you need some help in finding the way, be assured someone is here. Thank you also to all the parents who patiently and diligently filled in all the questionnaires. Your mighty effort was much appreciated, I only hope it was in some way beneficial to you and your family.

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Finally, a quote which aptly tells the tale of my last year of research and assessment...

"Far better to dare mighty things, to win glorious triumphs, even though checkered with failure, than to take rank with those poor spirits who neither enjoy much nor suffer much, because they live in the grey twilight that knows not victory, nor defeat."

Theodore Roosevelt, 1899.

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Chapter 1

INTRODUCTION

Overview

This first chapter briefly introduces the reader to the field of clinical psychology and the classification of mental disorders, moving then to investigate child clinical psychology within the context of the family. The family is discussed from a broader perspective as a fluid entity that is influenced by time and society. Within the family, each participant is influenced by interaction between members and the family's own underlying rules and methods of being. In investigating the family, family theorists generally share the same fundamental epistemological assumptions but make different ontological commitments about what structures and phenomenon exist within the family. Rather than discredit some and exclusively adopt the views of others, the fundamental theorists and their theories are presented in this study as the base of what is intended as an integrated approach to understanding the family. That is, the idea is to use the wealth of information gathered from all of the theories and findings about the family and employ them in the present study's investigation of the family environment in children's emotional and behavioural functioning.

Chapter two then concentrates on two broad categories of childhood disorders: internalising and externalising disorders. These are explained in terms of their basic premises followed by a discussion regarding the specific disorders that comprise the internalising and externalising categories. The internalising and externalising distinction is then examined in the context of the family, with a review of recent research literature. Chapters three and four explore some of the internalising disorders in depth. The anxiety disorders are first discussed in chapter three. What current research has to say about the relationship between anxiety and the family environment is then reviewed. Depression is first reviewed in terms of its comorbidity with anxiety with theories and findings presented speaking to the nature of the relationship between them. Discussion then moves to examine the relationship between these emotional factors and the family environment.

Chapter four is concerned with obsessive-compulsive disorder (OCD). This chapter begins by reviewing the characteristics and epidemiology of the disorder in order to provide a comprehensive overview of the disorder. The discussion then turns to the various theories regarding the aetiology of OCD. Two specific aetiologies are highlighted as theories the present study was designed to investigate.

Chapter five looks at the relationship between coping and significant life events, family environment, and emotional factors. Chapter six begins by focusing on the rationale and overall objectives of the present study, concluding with the specific hypotheses under investigation. The next chapter (seven) introduces methodology, beginning with details about the participants involved in the study, the measures used, and the procedure of the assessment process. The design and plan of analysis ends this chapter by explaining how the results were analysed and why the specific statistical procedures employed were chosen. Chapter eight presents the results of the statistical analysis of the data according to the specific hypotheses, while chapter nine discusses these results in depth. This discussion begins with the major findings, also considering the remaining specific hypotheses. The limitations of the present study are then presented before concluding with the possible future directions for research.

Operationalising 'Abnormal'

The field of clinical psychology, and the present study, is interested in that end of the continuum of psychological functioning that can be characterised as 'extreme'. Of course what is considered 'normal' and 'abnormal' to one person depends on the paradigm to which you adhere. For the sake of introduction, the section that follows corresponds to the medical model or paradigm. This paradigm allows the researcher to distinguish variables in terms relevant to the field; as evidenced in such terminology as 'mental illness', and to have a base from which categorising 'normal' and 'abnormal' is uniformly made. From this paradigm, it is also possible to classify and therefore distinguish between these problems characterised as at the extreme end of the psychological functioning continuum.

Classification of Mental Disorders

Classification in general refers to the process of developing groups from a larger set of entities. In psychopathology, a classification system is an organising system that allows clinicians to better understand the people who seek help from them (Blashfield, 1984). Blashfield and Draguns (1976) assert that a classification system has the following purposes: (a) it provides the language or agreed set of terms necessary for communication among researchers and clinicians; (b) is a basis for information retrieval; (c) provides descriptive information about the units being studied; (d) is a basis for making predictions (e.g., concerning prognosis, aetiology, and response to treatment should psychopathology be present); and (e) it provides the basic concepts required for theory formulation. Consequently, the use of diagnostic criteria to classify helps to decrease information, interpretation; and criterion related variance (Last, 1993).

Although several classification systems exist for classifying psychopathology (e.g., International Classification of Diseases (ICD) of the World Health Organization), the system that is most widely used in New Zealand is the American Psychiatric Association's 'Diagnostic and Statistical Manual of Mental Disorders' (DSM) (American Psychiatric Association, 1994). The most current version is the DSM-IV. The main advantage of the DSM-IV over other classification systems is its multi-axial formulation. By requiring the clinician or researcher to look at the different facets of psychopathology in the form of different axes, attention is given to the possibility of multiple forms of psychopathology and different areas of concern. This way, potentially important information relevant to understanding relationships among the disorders and in identifying dimensions of pathology that underlie the categories are less likely to be overlooked. It is important to note that the increased specificity and complexity of diagnostic criteria makes it more important to use standardised assessment protocols. This issue will be discussed later.

The Changing Family in New Zealand Society

The ever-changing face of the family supports both an optimistic and pessimistic view of social change. The family is in a perpetual state of evolution as it interacts with many other social structures in a myriad of complex transactions, and "...its ability to mediate, translate, and incorporate social change in the process of socialising its members is one of its major strengths" (Goode, 1964, p. 2).

However, it is becoming increasingly difficult to ascertain exactly what is considered to be a 'family'. Leonard and Hamilton (1990) point out that there are 22 different definitions of the word family. It seems that definitions reside on a continuum with more detailed descriptions based on theoretical or philosophical orientations at the one end and the much more simplistic statistical purpose built definitions at the other. Thus, definitions range from the traditional nuclear family to simply a group of persons residing together. In 1991, the New Zealand Census of Population and Dwellings defined family as either a couple (from a legal or de facto marriage) with or without a child (or children) who usually live in the same household. This definition of the family relies on two kinds of relationship: the presence of a couple (heterosexual only) and/or a parent-child relationship. Hence, a brother and sister living together are not counted as a family household.

Definitions aside, the face of the average New Zealand family has changed dramatically in the last four decades. This has meant continual adaptation for family members and families as a whole. Investigation into the environment of the present day New Zealand family then, requires understanding the history of change and present day demographics of what we consider to be 'family'.

New Zealand has a number of different types of households (e.g., single person, multiple single person households (flats)), but family households are by far the most common. The proportion of these households however, has declined over recent years, falling from 81 percent in 1971 to 73 percent of households in 1991. In addition, in 1991, 84.8 percent of all New Zealanders lived in one of New Zealand's 882,600 families, a slight drop from 87.3 percent in 1981.

With declining rates of marriage and births since the baby and wedding booms of the 1960's the number of two-parent families, accounting for two thirds of all New Zealand families in 1971, represented just under half of all families in the 1991 census. Average family size (as measured by the fertility rate) was 2.18 births per woman in 1992, almost half that of the 4.19 per woman in 1962. Rising numbers of families without children at home (an increase of 46 percent between 1976 and 1991) and one-parent families (more than double from 67,733 in 1976 to 151,755 in 1991) have all created a vastly different family structure than has ever been experienced before in New Zealand.

The divorce rate also tells a grim tale of the evolving family structure. In the early 1970's, 5 per 1,000 marriages ended in divorce; in the 1980's it was 8 per 1,000, but in 1992 the rate had risen again to a high of 12 per 1,000. In a possibly more optimistic light, however, divorce that involves children now (52 percent in 1991) is less than it used to be (78 percent in 1971) (Statistics New Zealand, 1995). Then again, the "normal" two-paycheck family may now be a relatively loosely organised entity whose primary locus is somewhere outside the household (Statistics New Zealand, 1995). There is decreasing contact between parents and children and decreasing parental involvement in child-rearing. Bronfenbrenner's 1979 claim that we are an age-segregated society within which children are raised more by peers, television, and day care than by parents is becoming even more true today (Gecas, 1988). As a result, Edwards (1988) maintains the "boundedness" and "unity" of what we call family are currently more difficult to maintain on a day-to-day basis.

The Family Environment

Childhood is a time of great learning and development. Parents, teachers and other caregivers exercise great influence on the child's world. Many of the most fundamental lessons are learned within the context of the family. It is no surprise then that when coupled with the stresses inherent in an ever-changing family structure, researchers focused on psychopathology in children have taken an increasing interest in understanding the family environment. Up until recently, researchers have been mostly interested in general family risk factors and their relation to overall pathology

(Hetherington & Martin, 1986; Jacob, 1987; Siqueland, Kendall & Steinberg, 1996). Much of the focus has now turned to an attempt to study the “mechanisms of effect” of family factors in an effort to understand more clearly the mutual influences family members have on each other (Siqueland, Kendall & Steinberg, 1996; Fauber & Lang, 1991). These mechanisms of effect can be investigated in various ways. There are many approaches and key theories that influence the way the family is conceptualised in clinical child psychology. It is not within the breadth of this study to include them all, rather those that are considered most pertinent to understanding family relationships, values, system maintenance, and parenting practices (Rubin & Mills, 1991).

Family Relationships

Salvador Minuchin is the primary developer of the structural family approach. The basis of this approach is that the structural characteristics of families produce behavioural and emotional problems. Thus, changing the family structure that supports the problems can effect changes to an individual’s symptoms. Generally, structure is conceptualised within this approach as representing the way relationships within the family are organised, particularly according to power and family rules. The family is asserted to be a rule-governed, hierarchically organised system that is made up of various important subsystems such as the parental dyad. Implicit rules within individual families are seen by Minuchin (1974) to maintain a degree of homeostasis within the family because as functional demands on the family vary, so do the rules. These rules then are the basis for the family’s structures; they regulate individual behaviour so as to facilitate daily functioning and maintain homeostasis.

According to Minuchin (1974), there are two sets of rules within a family: universal and individual. The universal rules respond to the cultural norms of the family, such as parents have more power than children. Individual rules are set by the specific family to regulate such as “father takes care of the financial decisions”. Both the individual and universal rules regulate the behaviour of each family member and the overall structure of the family, though flexibility with these rules is often useful so the family can adapt to change.

The family's subsystems include the extended family and are developed according to roles (e.g., generation, gender, interests) and relationships. These subsystems can overlap, interact, and separate according to the demands made on the family. Thus, each family member will usually belong to several subsystems involving a variety of roles and relationships (Dadds, 1995; Goldenberg & Goldenberg, 1985). However, the membership in a subsystem is not nearly as important as the clarity of its boundaries, as these are what regulate membership in various subsystems and in the family as a whole.

The nature and frequency of contact between family members depends upon the flexibility or permeability of the boundaries made around the different subsystems. This permeability operates on a continuum, with diffuse subsystem boundaries at one end and excessively rigid ones at the other. Diffuse boundaries are blurred and indistinct, and those family members involved find themselves easily intruded upon by other family members. The parents in these families tend to be too accessible. The children and parents may also exchange roles. Consequently, the children can fail to become independent or learn the appropriate skills to be capable of developing relations outside the family. These children may also find it difficult to establish a sense of personal identity in adulthood. Families that exhibit this lack of role differentiation are termed *enmeshed* by the structural family approach. There is generally a lack of separateness between enmeshed family members who tend to be overly alert and responsive to signs of distress. Often members intrude on others' thoughts and feelings, placing too high a value on family *cohesiveness* causing members to yield their autonomy. Enmeshment is said to be common in psychosomatic families (Goldenberg & Goldenberg, 1985).

Conversely, excessively rigid subsystem boundaries have impermeable barriers between subsystems and a strict generational hierarchy that has roles as separate and distinct from each other, especially in terms of power. Autonomy may be retained with rigid boundaries though typically there is no nurturance, involvement or exchange of affection between members. These families are described as *disengaged* by the strategic family approach and though members (as aforementioned) may function

separately and autonomously, there is little sense of family loyalty and a lack in the capacity for interdependence. Family communications are generally accompanied by extensive interpersonal distance.

Most families, however, are neither completely one nor the other, though they may contain some enmeshed or disengaged subsystems. By contrast, functional families are characterised by clear boundaries that allow each individual and subsystem to carry out its roles flexibly with a degree of autonomy while maintaining a sense of togetherness with the other members and subsystems (Dadds, 1995; Goldenberg & Goldenberg, 1985; Minuchin, 1974).

A major criticism of the structural approach is the lack of an empirical base, even in the light of its theoretical richness (Dadds, 1995). Indeed most family systems theorists reject the modern scientific movement of logical positivism provoked by the need for accountability in the face of escalating healthcare costs. This is based on the grounds that traditional research searches for unidirectional cause, assumes that there can be an “objective” observer, and an external reality can be objectively measured (Dadds, 1995). However, despite such a philosophical stance, research on relationships as been carried out, primarily using correlational methods.

In characterising the relationships between members of the family, there are several factors which have been the focus of assessment (Stark, Humphrey, Crook, & Lewis, 1990; Bloom, 1985; Bloom & Naar, 1994; Siqueland, Kendall & Steinberg, 1996). These factors include assessing for the level of expressiveness in the relationship between family members. Expressiveness describes the member’s ability to communicate emotion through facial expression, vocalisation and gestures. This factor also provides valuable information on the emotional openness of the relationships, and their willingness to share emotional experiences with each other.

Conflict was identified by Moos (1974) as another integral component characterising relationships between family members. Conflict is defined as the simultaneous occurrence of two or more mutually antagonistic impulses or motives which precipitate

a mental crisis. This is distinguished from a root conflict, which existed from childhood in a dormant condition. A certain amount of conflict within a family is natural and normal, but excesses in either direction (i.e., virtually no conflict or an inappropriately large proportion of conflicts) may indicate more residual problems within the family structure.

Bloom (1986) concluded, after reviewing family environment research, that three additional factors constituted other important components characterising family relationships. Included were family sociability, the extent to which family members seek and derive gratification from social interactions with each other; family idealisation, the extent to which the family is prized by its members; and, as aforementioned, disengagement, the extent to which family members fail to be drawn to each other or to be interdependent. Bloom's (1986) data indicated that intact and disrupted families were significantly different on each of these components.

System Maintenance

The area of system maintenance provides information about the structure or organisation within the family and about the degree of control that is usually exerted by the family members vis-à-vis each other (Moos, 1974). This concept of control is the extent to which the family is organised in a hierarchical manner, the rigidity of family rules and procedures and the extent to which family members order each other around (Moos, 1974). There are three relatively independent family styles that indicate different levels of control (Bloom, 1986). Democratic family style, regarding the extent to which decision making is based upon full participation of all family members; laissez-faire family style, concerning the extent to which rules governing family behaviour fail to exist or to be enforced; and authoritarian family style, the extent parents are the locus of rule making and punishment in the event of rule breaking (Bloom, 1986). In addition, external locus of control, the degree family fate is seen as a function of circumstances beyond the control of the family, and enmeshment, the amount family members are seen as insisting on interdependence to the exclusion of individual action, have also been identified by Bloom (1986), in his factor analysis of family environment measures, as components of system maintenance.

Parenting Practices

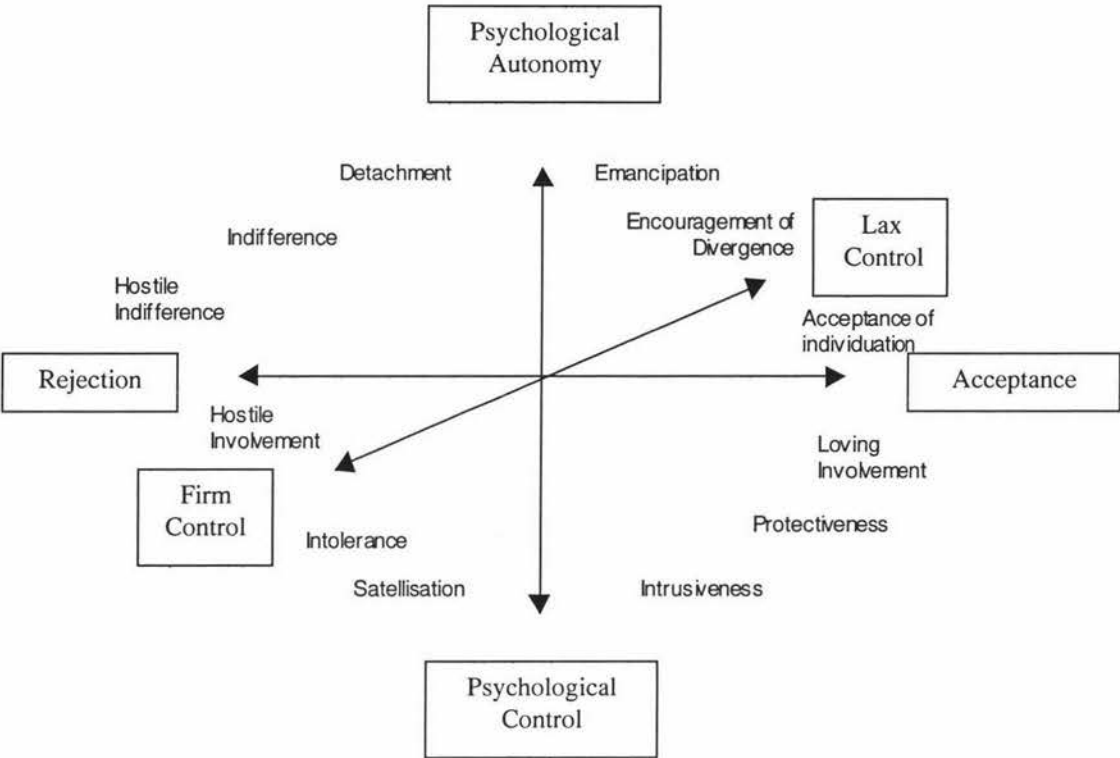
Loeber and Stouthamer-Loeber (1986) conducted a meta-analysis of over 300 studies linking parenting practices to aggressive and antisocial behaviour in children and adolescents. They found that the strongest and most consistent associations with antisocial behaviour were for measures of parental monitoring and supervision of their child and for measures of parental involvement in the activities of their child. The importance of these two dimensions of parenting has been supported in several studies published after this meta-analysis (Cernkovich & Giordano, 1987; Van Voortis, Cullen, Mathers, & Garner, 1988; Wilson, 1987). In addition, several aspects of parental discipline have been consistently linked to child problems. Specifically, inconsistent use of discipline, failure to use positive change strategies (e.g., positive reinforcement for appropriate behaviour), and excessive use of corporal punishment have been linked to child problems in a number of studies (Bierman & Smoot, 1991; Frick et al., 1992; Laub & Sampson, 1988; Patterson, Dishion & Bank, 1984; Strassberg, Dodge, Pettit & Bates, 1994; Wells & Rankin, 1988).

Earlier, the concept of control was discussed in the context of system maintenance. This conception of control is primarily centred on how family members seek to control each other; the following discussion focuses on the control parents exert, as perceived by the child. Types and patterns of parental controlling behaviour and their consequent effects on children's development have been the focus of considerable research over the past several decades (Barber, Olsen & Shagle, 1994). Although specific categorisations for this control vary, researchers have consistently identified control in their conceptualisations of salient parental behaviours (Baumrind, 1991a, 1991b; Burger & Armentrout, 1971; Schaefer, 1965). The numerous ways parental control has been conceptualised and operationalised testifies to the complexity of the construct. Barber, Olsen and Shagle (1994), in their research on the associations between parental psychological and behavioural control and youth internalising and externalising behaviours, conclude that the different types of parental control have begun to be adequately operationalised but still require more research. Much support, however, has been provided for Shaefer's (1965) model of parental control (Barber, 1996; Barber,

Olsen & Shagle, 1994; Schwartz, Barton-Henry, & Pruzinsky, 1985; Schludermann & Schludermann, 1970). Shaefer (1965) proposed a spherical conceptual model for perceived parent behaviour. Three major dimensions were isolated through factor analysis of Shaefer's (1965) Children's Report of Parental Behaviour. The first dimension is Acceptance versus Rejection, with the positive end of the continuum defined by positive evaluation, sharing, expression of affection, emotional support and equalitarian treatment. The negative end of the continuum is characterised by ignoring, neglect and rejection. The second dimension is Psychological Autonomy versus Psychological Control with the negative defining scales describing covert, psychological methods of controlling the child's activities and behaviours that do not permit the child to develop as an individual apart from the parent. Dimension three, Firm Control versus Lax Control indicates the degree to which the parent makes rules and regulations, sets limits to the child's activities, and enforces these rules and limits.

Figure one shows the spherical concept in three-dimensional form, also isolating the particular factors, and their place along the dimensions, which contribute toward the dimensions. Another parent behaviour questionnaire, Roe and Siegleman's (1963) Parent-Child Relations Questionnaire, and Becker's (1964) factor analysis of psychologists' ratings of parent behaviour had similar dimensions, with the differences between them simply attributed to differences in labelling identical dimensions (Shaefer, 1965). Later, Schludermann and Schludermann (1970) revised the original questionnaire, shortening it, but found the original dimensions identified by Shaefer (1965) to be statistically stable. Also, Steinberg (1990) and Barber, Olsen and Shagle (1994) have more recently emphasised the importance of the distinctions between these dimensions and concluded that many findings from the child development literature can be interpreted to support them, particularly the psychological control versus psychological autonomy dimension.

Figure 1. A three-dimensional model for parent behaviour.



Chapter 2

Externalising and Internalising Disorders

The literature which is mounting on the influences family members exert on each other has, as in other areas of child clinical psychology, been more directed towards the study of externalising disorders (Siqueland, Kendall & Steinberg, 1996). In contrast, less is understood about familial influences on internalising disorders. However, the prevalence and course of internalising disorders, as well as the problems associated with anxiety and depression in children, necessitate a concurrent focus on the treatment of internalising disorders and related family factors (Kendall, Flannery-Shroeder, Panichelli-Mindel, Southam-Gerow, Henin, & Warman, 1997).

Internalising and externalising disorders describe a distinction largely made through the empirical work of Achenbach and colleagues (Achenbach 1966, 1985, 1988; Achenbach & Edelbrock, 1978; Achenbach & McConaughy, 1987). Externalising disorders are characterised by their outer-directed nature, in which the core symptoms are associated with under-controlled behaviours. Included in this category are mostly those disorders which feature under the DSM-IV general heading of “disruptive behavior disorders”, and include attention-deficit/hyperactivity disorder, conduct disorder, and oppositional defiant disorder (for a brief overview of the externalising disorders see Appendix A). The behaviours exhibited by children with these disorders are generally obvious (e.g., impulsivity, aggression, defiance).

Internalising disorders are, conversely, generally identified as inner-directed and characteristically by over-controlled behaviours. However, unlike the externalising disorders, the specific disorders which make up the internalising disorders group is not so straight forward and often depends on the source of evaluation used in the particular research (Achenbach and McConaughy, 1992). The syndromes that make up the internalising domain in this study are those which align with both the aforementioned over-controlled behaviour criteria and fit the most closely with DSM-IV, as found in Reynolds (1992). Included are the somatoform disorders, somatic disorders, mood

disorders, uncommunicative disorders and anxiety disorders (for an overview of these disorders see Appendix B).

To expand on the delineation of the internalising-externalising continuum, Achenbach (1982) sees introversion and extroversion as the two extreme ends of the dimension of adaptive behaviour. According to Achenbach (1982), children's behaviour problems that conflict with or affect the exterior environment are externalising, while problems that focus within the self are considered internalising. Rothbaum and Weisz (1989) assess this distinction in terms of those problems that cause suffering or distress in the self (internalising) as compared to functioning and behaviour that causes or results in distress in others (externalising). Rubin and Mills (1991) further suggest that the presence of social withdrawal distinguishes the internalising disorders from the externalising, as they assert this to be the prime behavioural manifestation of psychological over-control.

However, child psychological disorders do not always fit neatly into such dichotomous categories (Rothbaum & Weisz, 1989). A number of disorders may be expressed with distinctly mixed features. For example, obsessive-compulsive disorder clearly represents behaviour excess with its overt ritualising (e.g., excessive handwashing, counting out loud, inability to walk through doorways in an appropriate manner and so on), and yet maintains covert, cognitive characteristics (i.e., obsessionality) as core components (Johnson & March, 1992). In addition, epidemiological findings confirm that large numbers of children have both internalising and externalising disorders (Puig-Antich, 1982). For example, major depression in children has been found to be comorbid with many internalising and externalising disorders, including conduct disorder, attention-deficit/hyperactivity disorder, substance abuse, eating disorders, personality disorders, developmental disorders, and anxiety disorders (Alessi, McManus, Grapentine, & Brickman, 1984; Puig-Antich & Rabinovich, 1986; Strauss, Last, Hersen, & Kazdin, 1988; Rubin & Mills, 1991; Smets & Hartup, 1988). In addition, symptoms that might be viewed as externalising or internalising may also be characteristic of a disorder in the other category. For example, a primary symptom of depression is dysphoric mood (i.e., feeling sad, down). Yet, in some children, this symptom may not be expressed through an internalising symptom (e.g., sadness) but

rather by an externalising behaviour (e.g., irritability) (American Psychiatric Association, 1987).

The methods and procedures used to evaluate and assess these two domains are another way of distinguishing between the externalising and internalising disorders. Generally, parent or teacher reports using structured behavioural checklists (such as the Child Behaviour Checklist) or direct behaviour observation are utilised in the assessment of externalising disorders (Reynolds, 1992). Internalising disorders on the other hand, are best evaluated through the use of self reports and clinical interviews with the child. Research in these areas suggest there is minimal agreement between parent and child reports of the child's behaviour for externalising (e.g., Reynolds & Stark, 1986) and internalising behaviours (e.g., Reynolds, Anderson, & Bartell, 1985). For cases where the child is experiencing an externalising disorder, it is considered that adults provide the best source for information, as they are in the best position to observe the behavioural excess symptomatic in these children. Conversely, as internalising disorders are by nature inner-directed and can largely be covert, the child is often considered the best source for information (Reynolds, 1992).

From a phenomenological perspective, internalising features are typically more difficult to detect and assess compared to the externalising disorders. By their covert nature, the symptoms are often not apparent and can make identification and diagnosis difficult. In educational settings, internalising disorders do not come to the attention of teachers as readily as do other classroom-related problem behaviours in children. The degree to which internalising disorders can be observed or demonstrate overt symptoms can also vary between the disorders within this category or domain. For example, a child with school phobia, who refuses to go to school, will soon come to the attention of school authorities, whereas a child with social phobia may simply appear overly shy, quiet and compliant.

The study of externalising disorders as a distinctive group of disorders has been present in psychological literature for a long time, much longer than the nearly two decades study of internalising disorders as a group (Rubin and Mills, 1991). This is due to

various factors. The first is the nature of the externalising disorders. By virtue of their symptomatology they are much more obvious and problematic to the outside world of the child with such a disorder. Their presence is salient and likely to evoke some form of negative affect in others (e.g., anger). Treatment interventions are generally designed to try and minimise the disturbance to the child and his or her environment (Mills & Rubin, 1990; Younger, Gentile, & Burgess, 1972).

Second, as schooling began to include children at younger and younger ages (i.e., daycare and kindergarten) and for longer periods of the day, the attention of educators was naturally drawn more often to the unmanageable behaviours of the externalising disorders (Rubin & Mills, 1991). Meanwhile, those children with more purely internalising disorders tend to appear quiet and often good mannered. In this context, it is easy to understand how little attention was given to these children in favour of their externalising counterparts.

Third, childhood aggression is predictive of antisocial behaviour in adolescence and adulthood (e.g., Parker & Asher, 1987). Aggression and other behaviours of under-control are also associated with a plethora of other difficulties. For example, externalisers, as a group, have deficits in understanding the perspective's, feelings, and intentions of others (Dodge, 1986; Rubin, Bream, & Rose-Krasnor, 1983; Rubin & Mills, 1991). They bully their classmates and quickly establish, for themselves, negative reputations amongst their peers (Coie & Kuperschmidt, 1983; Dodge, 1986). These factors put together provide potential danger to society and, as a consequence, it is again not surprising that externalising disorders have attracted the most empirical scrutiny and research.

In contrast, up until the late 1960s, it was believed that behavioural manifestations of psychological overcontrol (internalising) in childhood were relatively unstable and not significantly predictive of maladjustment during adolescence and adulthood (Kohlberg, LaCrosse, & Ricks, 1972; Parker & Asher, 1987; Rubin & Mills, 1991). In addition, the prevailing (psychoanalytic) theory suggested that true depression could not be experienced until the superego was fully developed in adolescence (Kashani, Husain,

Shekim, Hodges, Cytryn, & McKnew, 1981). Taken together, the prevailing theories and available data failed to evoke the same kind of urgency to understand internalising problems, as was the case for externalising disorders.

After nearly a decade, the 1970s saw a significant amount of research generated specifically with regard to internalising disorders in adults (Rubin & Mills, 1991). This literature provided the theoretical framework upon which the study of internalising disorders in childhood and adolescence was based (Rubin & Mills, 1991). The childhood internalising disorders were initially based upon many of the same models, theories, and diagnostic criteria developed for use with adults.

Interest in studying the internalising disorders emerged in parallel with several other pivotal developments in psychology and psychiatry. Included among these is the widespread interest by psychologists and psychiatrists in cognitive theories of psychopathology (e.g., Beck, 1976; Lewinsohn, 1974; Meichenbaum, 1977), as well as the draft, publication and revision of the 'Diagnostic and Statistical Manual of Mental Disorders', Third Edition (DSM-III and DSM-III-R, American Psychiatric Association, 1980, 1987). As discussed earlier, the publication of DSM-III appeared to confirm the nascent interest in formally diagnosing children and adolescents with difficulties other than simply those problems related to school performance or behavioural excess (Reynolds, 1992).

The Family Environment and Internalising Disorders

Rubin and Mills (1990), in their study on maternal beliefs about adaptive and maladaptive social behaviours of internalising, externalising and normal children, found that mothers with internalising children placed greater importance on the directive teaching of social skills than did the mothers of the externalising or normal groups. The mothers of internalising children were also more likely to choose high-power strategies for dealing with unskilled behaviours than the other mothers. It was concluded that mothers of internalising children believe more strongly in a *directive* approach to proactive teaching, and in their reactive strategies may be described as

overcontrolling (Rubin & Mills, 1990). Mothers of internalising children in this study were also significantly more likely to blame themselves for their children's displays of unskilled behaviour. They also felt more angry, disappointed, guilty and embarrassed than mothers from the externalising or normal groups. These mothers were also more inclined to blame unskilled behaviour on a trait in their child (Rubin & Mills, 1990). Rubin and Mills (1990) deduced from these findings that the withdrawn child is exposed to a complex mix of conflicting emotions and attributions in their mothers, a conclusion which supports the suggestion that mothers of internalising children may feel overidentified with and therefore behave ambivalently toward their children (Levy, 1943; Parker, 1983).

Systems theorists have linked internalisation to various dimensions of family functioning, including *enmeshment* and the rigidity of subsystem boundaries (Minuchin, Rossman, & Baker, 1978), centripetal (basically enmeshed) family relations (Beavers, 1982), and "consensus sensitivity", that is, the use of family rules requiring closeness and agreement (Reiss, 1971). On the other hand, symptom clusters indicative of externalisation have been linked to *disengagement*, chaotic and unstable family styles, and "interpersonal sensitivity", that is, inattention of family members to one another accompanied by excessive attention to the external environment (Smets & Hartup, 1988). Thus, internalising and externalising are thought to relate to family *cohesion* and *adaptability* somewhat differently, even though these dimensions have not been conceived as orthogonal (correlations between theoretically relevant measures range from .50, depending on the assessment instruments used) (Smets & Hartup, 1988).

Barber, Olsen and Shagle (1994) also found that patterns of family interaction that inhibit or intrude on the psychological development of youth pose particular risk for internalising problems, whereas insufficient structure or regulation of behaviour would be more strongly associated with externalising problems. Their findings also provided support for psychological control and behavioural control as empirically identified and independent dimensions of family interaction (Barber, Olsen, & Shagle, 1994).

Turning to look specifically at internalising problems, Rubin and Mills (1991) have proposed a pathway by which internalising disorders develop in childhood. The internalising difficulties are said to arise from an interaction among the temperamental dispositions in the child, socialisation experiences with the parents, and certain setting conditions (e.g., poverty and family stress). Rubin and Mills (1991) postulated that temperamental wariness in infancy might lead to less sensitive and responsive parenting due to the difficulty in comforting and soothing these infants. An insecure attachment relationship develops, which may then lead to limited exploration of the environment by the child, especially in novel situations. Rubin and Mills (1991) therefore suggested that parents who sense their children's difficulties and helplessness may try to intervene in a highly directive manner or to even take over for the child. However, this overcontrol and over-involvement by parents may further exacerbate the child's sense of helplessness and incompetence. It is at this theoretical stage of Rubin and Mills' (1991) developmental model that the family environment variables in relation to internalising and externalising were investigated in the present study.

The previous chapter discussed family environment at various different levels, from general systems theory regarding the relationships, values and system maintenance aspects of the family environment (Minuchin, 1974; Dadds, 1995; Moos, 1974; Stark et al., 1990; Bloom, 1986; Bloom & Naar, 1994; Siqueland et al., 1996) to parenting practices (Barber et al., 1994; Baumrind, 1991a, 1991b; Burger & Armentrout, 1971; Shaefer, 1965). No single study has thus far examined family environment at all of these levels, and none specifically in relation to internalising and externalising problems. The present study examined family environment at both the systemic and parent practice levels, to provide insight into the concurrent effects of parent practices and the family system as they relate to internalising and externalising disorders.

The previous studies discussed earlier suggest the internalising and externalising disorders may be distinguished in terms of family environment according to levels of cohesion, adaptability and parental control. The relationships between internalising and externalising disorders and both the family system and parenting practices concurrently is unclear. Thus, the present study examined these relationships.

As previously discussed, there are several specific disorders that make up the internalising group of disorders. Anxiety and depression are two such disorders and are discussed in depth in the following chapter.

Chapter 3

Anxiety and Depression

Anxiety

Many researchers have found that anxiety in childhood has a profound and damaging affect on adjustment, including social adjustment and academic functioning (e.g., Chansky & Kendall, 1997; Strauss, Frame, & Forehand, 1987; Strauss, Lease, Kazdin, Dulcan, & Last, 1989). In addition, anxiety disorders usually have a chronic course and are highly associated with anxiety problems in adulthood (Keller, Lavori, Wunder, Beardslee, Schwartz, & Roth, 1992; Last, 1988). Epidemiological data now shows that anxiety is common in childhood, and anxiety disorders may be one of the most common psychological problems in childhood and adulthood (e.g., Anderson, 1994; Bell-Dolan, Last, & Strauss, 1990).

The sensation of anxiety is a universal experience. The associated feelings consist largely of a diffuse and unpleasant sense of apprehension usually paired with particular autonomic responses. These responses often include heart palpitations, perspiration, stomach discomfort, a tightening feeling in the chest and increased restlessness (American Psychiatric Association). As with other experiences, the autonomic responses of anxiety differ across individuals. The conditions that separate 'normal' experiences and problematic or clinical levels of anxiety generally concern the severity and duration of the anxious experience. After all, it is normal for a child to be anxious on their first day of school or when their parent leaves after divorce or separation, but it is not normal generally for anxiety to persist for an inappropriately long period of time and at excessive levels.

In examining anxiety, it is important to know the difference between the concepts of anxiety and fear. To use a metaphor, anxiety can be seen as the alerting signal. It warns of possible threat and enables the individual to take appropriate measures to address this threat. Fear, on the other hand, is a response to a known, external and defined object or situation. So anxiety can be seen, in this sense, to be in response to an internal and ill defined object or situation (Kaplan, Sadock & Grebb, 1994).

Fears are considered common and normal in children of all ages, but the frequency of fears appear to peak early (around ages 2-4) and decrease thereafter (Ronan & Deane, 1998). In infancy, the most common fears are of strange objects and persons, noises, and falling. Animals are generally not an object of fear until around three years of age, and fear of the dark is the most common fear reported by four to five year olds. Some fears, such as snakes, spiders and meeting people are not age dependent and can occur at any time in life (Husain & Kashani, 1992). In alignment with increasing cognitive development, fears become increasingly more anticipatory, internalised and broaden in scope to political, social, home, and school-related situations (e.g., Croake and Knox, 1973).

As mentioned earlier, the DSM-IV (American Psychiatric Association) is widely used for categorising anxiety disorders among children. The DSM-IV lists a single, major category of anxiety disorder. Included here are the specific disorders posttraumatic stress disorder, acute stress disorder, specific phobia, school phobia, panic disorder and agoraphobia, and generalised anxiety disorder. Separation anxiety disorder is differentiated from the previous disorders as specifically relevant to childhood and adolescence (see Appendix C for an overview of these disorders).

Anxiety and the Family Environment

Siqueland, Kendall, and Steinberg (1996) conducted a study on the perceived family environments and observed family interactions of anxious children from a normal population. This study was the first to assess the relationship between parent practices and diagnosable anxiety disorders within a normal population that was not limited by its descriptive nature and lack of control groups (Siqueland et al., 1996). Siqueland et al. (1996) found there to be a difference between families of children with anxiety disorders and nonclinical families on the construct of psychological control. That is, parents of children with anxiety disorders were less granting of *psychological autonomy* than controls. In addition, children with anxiety disorders rated both their mothers and fathers as less *accepting* than control children rated their parents.

In a study on broad spectrum anxiety disorders, Rubin and Mills (1990) reported that mothers of withdrawn-internalising children were more angry, disappointed, embarrassed, and guilty about displays of withdrawal (and aggression) by their children than were mothers of normal controls. These negative feelings expressed by parents suggested that the *over-involvement* attributed to these families might also have angry undercurrents.

Presently, the family as a system has not been included in family environment studies on anxiety in children. The present study includes this dimension of the family environment along with re-examining parent practices. It is expected that the anxious children's parent(s) will be less granting of psychological autonomy, less accepting and be more over-involved, or what Minuchin (1974) would describe as enmeshed.

Depression and the Family Environment

Depression experienced during childhood is relatively common, enduring and recurrent (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984) that has adverse effects upon the child's academic (Stark, Livingston, Laurent, & Cardenas, 1989) and psychosocial development (Puig-Antich, Lukens, Davies, Goetz, Brennan-Quattroch, & Trodak, 1985). In some cases, depression can lead to self-destructive and life threatening behaviours (Carlson, 1983). Kovacs (1985) has also suggested that depression in childhood is more prevalent than previously thought.

Stark, Humphrey, Crook and Lewis (1990) contend that while depression in childhood is generally recognised as a very serious disorder, and advances have been made in assessment (Kendall, Cantwell, & Kazdin, 1989) and treatment (Stark, 1990), relatively little is known about the familial contribution to depression among children. Coming from a psychoanalytic perspective, Arieti and Bemporad (1980) characterised the families of depressed youths as consisting of at least one powerful parent who is highly critical and intolerant of behaviour that deviates from his or her expectations. When a child does not behave in accord with parental expectations, this misbehaviour is dealt with through punitive and psychologically damaging means such as guilt inducement, shame, and the threat of abandonment. That is, higher levels of psychological control

are exerted. Affection is expressed contingently upon achievement and behaviour that is consistent with parental expectations. For example, Grossman, Poznanski, and Banegas (1983) emphasise *enmeshment* in the mother and depressed daughter relationship.

Puig-Antich et al. (1985), in a study on the mother's perspective of their family and depressed child, found that impairment in functioning was greatest for the depressed group of children when compared with a psychological control group. The characteristics of these relationships also included what might be considered excessive use of psychological control. The mothers of the depressed children reported significantly less communication with their child, with the affective tone from the mother to the depressed child being characterised as cold, hostile, tense, and at times rejecting. They also reported subjecting their children to more severe punishment. It was found that the impairments in communication and affective tone of the mother to the child were significantly worse among families with a depressed child. Furthermore, these dyads engaged in significantly fewer *activities* together. The mothers' descriptions of the father-to-child relationship were found to be similar, although the significant differences that were found did not identify the psychological disorder under investigation.

In a study looking at both depression and anxiety, Stark, Humphrey, Crook, and Lewis (1990) assessed mothers' and children's perceptions of their family environment. Generally, they found that conflict was reported at higher levels by both the depressed, depressed and anxious, and purely anxious groups compared to the normal controls. However, the highest levels of *conflict* were found in the depressed group. This is consistent with reports by Forehand, Brody, Slotkin, Fauber, McCombs, and Long (1988) and Puig-Antich et al. (1985). Also consistent with the findings of Puig-Antich et al. (1985) were the lower levels of *recreational activity* reported by the depressed group in Stark et al.'s (1990) study. This reduction in activity level deprives family members of possible sources of reinforcement (Lewinson, 1975), and distraction from daily problems. Furthermore, given higher levels of conflict, this may keep them in increased contact with one another, which would then increase the probability of another conflict (Stark et al., 1990). The higher level of *enmeshment* reported by the

depressed group in this study is also consistent with the findings of Grossman, Poznanski, and Banegas (1983). These results suggest families that are continually together and in conflict (Stark et al., 1990).

Stark et al. (1990) assert that one of their most consistent findings was that families with a depressed child were perceived to be significantly less *democratic* than all of the other families. This led them to suggest that depressed children, and to a lesser extent anxious children, have less say in the decision making in their families. This further implies that this lack of input in decision making within the family could lead to a sense of helplessness in the child.

Existing research suggests then, that there are some important differences between families with a depressed child and those without. The family factors of enmeshment, recreational involvement, conflict and democratic family style have been implicated in the relationship between depression and family environment. Also, psychological control may be more highly utilised in the parental practices of depressed children. However, despite these initial findings, research into the family environment of depressed children is still somewhat limited. The relationship between the family and depression has not been examined in the context of both the family system and specific parenting practices (i.e., parental control, discipline practices). The purpose of the present study is to examine this relationship within a normal population, and to compare it with the family environment of children experiencing anxiety and obsessive-compulsive disorder (OCD). The present study may expect to find higher levels of enmeshment, conflict and parental use of psychological control, plus lower levels of recreational involvement and a less democratic family style as predictors of depression.

Depression's Comorbidity with Anxiety

Anxiety disorders are often comorbid with other disorders in childhood and may increase the chance of significant dysfunction in later life (Brady & Kendall, 1992; Mattison, 1988). Anxiety disorders share the highest rate of comorbidity with depression with many researchers suggesting this is because they are inter-related (Journal of Clinical Psychiatry, 1993), some adding that anxiety is a possible precursor

to depression (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998). As many as two thirds of all individuals with depressive symptoms have prominent anxiety symptoms and researchers have reported that from twenty to ninety percent of all individuals with panic disorder have episodes of major depressive disorder. Brady and Kendall (1992), in their review of studies on the comorbidity of anxiety and depression in children and adolescents, found that 15.9 to 61.9 percent of children identified as anxious or depressed had comorbid anxiety and depressive disorders.

Family Environment and the Anxiety-Depression Distinction

Research on the family environment's relationship to both anxiety and depression is somewhat limited. Few studies have identified specific family variables that can be identified as belonging to both anxiety and depression.

Stark, Humphrey, Laurent, Livingston and Christopher (1993), in a study on the differentiation between anxiety and depression, found anxiety and depression to be significantly different disorders that are characterised by unique cognitive, behavioural, and family profiles. In terms of supplying pertinent information on specific family environment variables however, other than indicating the general family environment dimensions that were assessed, they did not specify which particular family environment variables predicted anxious or depressed group membership.

In a study evaluating the family perceptions of children diagnosed with anxiety, depression, and anxiety and depressive disorders together, Stark, Humphrey, Crook, and Lewis (1990) found that the diagnostic status of these three groups could be validly predicted based on the children's perceptions of their family environment. Taken together, all three of these groups of children described their families as being more *conflictual* and *enmeshed*. They were also less *supportive*, *cohesive*, *open to expression*, and *democratic* in their decision making compared to families with children without anxiety or depressive disorders. This same pattern of differences was evident between the family environments of the depressed and anxious children and the solely anxious children (i.e., anxious and depressed more dysfunctional). The mothers reports largely corroborated their child's. That is, according to both maternal and child reports,

the families with an anxious and depressed child were less involved in recreational activities, had less of an emphasis on morality and religion, were more enmeshed, and had a less democratic family style. The children, unlike the maternal figures, also felt less support from the family and greater conflict (Stark et al., 1990).

Anxiety and Depression as Combined Disorder

Brady and Kendall (1992), in a study reviewing the comorbidity of anxiety and depression in children and adolescents, suggest there are two competing views in the anxiety-depression debate. The first is that they are two distinct entities, though highly related. This is the most widely held position and can be evidenced by their separate classifications in DSM-IV. The second is that the commonalities between them are so profound that a single disorder exists. That is, anxiety and depression make up a larger, broader disorder, which Watson and Clark (1984) termed *negative affectivity*.

Conceptualisations of this combined disorder vary, but the basic premise is that anxiety and depression are variants of a single mood disorder (Brady & Kendall, 1992).

Several models have been proposed to describe the nature of this mood disorder. One model proposes anxiety and depression to form a continuum, with anxiety at one end and depression at the other. It is suggested that any one person can be at any place on this continuum and their position can change over time (e.g., Dealy, Ishiki, Avery, Wilson, & Dunner, 1981). Another conceptualisation sees anxiety to have a temporal relationship with depression. Hershberg, Carlson, Cantwell, and Strober (1982) and Stavrakaki, Vargo, Boodoosingh, and Roberts (1987) in studies on depression and anxiety suggested that anxious children tended to be younger than depressed children. Kovacs, Gatsonis, Paulauskas, and Richards (1989), in a study on the comorbidity of childhood anxiety and depression, found that the onset of the first anxiety episode tended to precede the onset of depression. In addition, Reinherz, Giaconia, Pakiz, Silverman, Frost, and Lefkowitz (1993) and Reinherz, Stewart-Berghauer, Moeykens, Pakiz, Frost, and Holmes (1989) found that prior levels of anxiety predicted depression. Cole, Peeke, Martin, Truglio, and Seroczynski (1998), in a longitudinal study looking at the relationship between anxiety and depression in children, found higher levels of self-reported and parent-reported anxiety at one point in time predicted change in

reported depression six months later, while controlling for previous depression. This study also found that high levels of child and parent reported depression did not predict increases in anxiety symptomatology. Unlike many of the previous studies, the Cole et al (1998) study is not limited by a cross-sectional design and problems with developmental cohort effects, selection bias, or the existence of a strong contemporaneous relation between depression and anxiety.

The previously discussed research of Stark et al. (1990), in their study on perceptions of the family environment and depression, suggested family environment and depression were related on three family environment factors: increased conflict; decreased time spent in recreational activity; and increased enmeshment. Combining this research with that of Cole et al. (1998), on the temporal relationship anxiety and depression have, it may be that the family environment is a moderator in this relationship between anxiety and depression. That is, if family environment is related to depression, and anxiety precedes depression, then family environment effects the relationship between anxiety and depression. This is one of the hypotheses under investigation in the present study.

Chapter 4

Obsessive-Compulsive Disorder

What is Obsessive-Compulsive Disorder?

Obsessive-compulsive disorder (OCD) in children and adolescents is characterised by obsessions and compulsions. Obsessions are considered by DSM-IV to be recurrent or persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress. These thoughts, impulses, or images are not considered to be simply excessive worries about real-life problems. The child reacts by attempting to ignore or suppress these thoughts, impulses, or images, or by trying to neutralise them with some other thought or action.

Compulsions are defined by the DSM-IV as repetitive behaviours (e.g., handwashing) or mental acts (e.g., counting) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly. These behaviours or mental acts are aimed at reducing or preventing distress, or preventing some dreaded event or situation; however, these behaviours or mental acts are not connected in a realistic way with what they are designed to neutralise or prevent, or are clearly excessive.

Additional criteria for a diagnosis of OCD include (a) that the obsessions and compulsions cause marked distress, (b) that they are time-consuming (more than an hour a day), or (c) that they significantly interfere with school, social activities, or important relationships. The symptoms must be checked that a substance or medication does not cause them. Also, that the specific content of the obsessions must not be related to another (Axis I) diagnosis in DSM-IV; such as thoughts about food resulting from an eating disorder or guilty thoughts (ruminations) from depression (Kaplan, Sadock & Grebb, 1994).

Adults usually recognise that the obsessions or compulsions are excessive or unreasonable sometime during the course of the disorder. Children however, may not

recognise the senselessness of the obsession, (i.e., OCD with poor insight) (American Psychiatric Association, 1994). This is suggested to be because children may have not yet developed the cognitive skills required to understand these obsessions or compulsions are excessive or unreasonable (Franzblau, Kanadianian, & Rettig, 1995). This distinction has not been researched by the American Psychiatric Association and is therefore theoretical, though presumably based on clinical observation and clinician reports. The present research addressed this issue as an ancillary feature of the study.

Epidemiology of OCD

In terms of onset, the earliest age at which obsessive-compulsive disorder has been reported is five years old (Janet, 1903). Hall (1935) however, described 'obsessional states' in a child as young as four. Hollingsworth (1980) found that 76 percent of children who were experiencing OCD were male. Rapoport (1986) also reported a ratio of three males to every one female child with OCD. Rapoport (1986) additionally found that males had an average onset two and a half years earlier than females. The overall average age of onset is somewhere between seven and a half and ten years of age. Judd (1965) reported an average age of onset of seven and a half years; Hollingsworth (1980) and Rapoport (1981), nine and a half years. In another study however, Rapoport (1989) found an average of ten years, with boys' average year of onset at age nine and girls at age eleven.

Onset may also be differentiated according to its type - acute or insidious. When it is acute, the symptoms of OCD occur rapidly and within a very short space of time. In these cases some precipitating event can usually be identified, which has been attributed to either psychological (Loeb, 1986), physical (McKeon, Roa, & Mann, 1984), or birth (Capstick & Seldrup, 1977) trauma.

Obsessive-compulsive disorder has a prevalence in youth of approximately .5% (i.e., one in every two hundred young people), (Flament, 1990). It has been suggested that this may be an underestimation due to under-diagnosis and under-treatment (Jenike, 1989). March and Leonard (1996) further suggested that if underdiagnosis is an issue, it may be due in part to secretiveness about OCD symptoms and lack of insight into the disorder. Rituals of washing and obsessions around fears of contamination and germs

appear to affect the majority of children with OCD. Table 1 shows the rituals and obsessions most commonly experienced by children with OCD. Dr Judith Rapoport, in her book ‘The Boy Who Couldn’t Stop Washing’ (1989), speculated on the basis of anecdotal evidence that symptoms can and usually do change over time. Following such observations, she proposed a developmental model contending that when OCD onset is prior to adolescence, the children often count, check, or repeat movements. Adolescents, may tend to wash, and after adolescence, they may ruminate. But at some unspecified stage in their OCD symptomatology, almost 85% of her patients had some grooming or washing ritual (which they also found to be so in countries that have less preoccupation with cleanliness, e.g. rural Nigeria). March & Leonard’s (1996) research also found that most children experience washing and checking rituals at some time during the course of their illness. Thus far, there is no research to support Rapoport’s (1989) developmental pathway model. The present study, using a cross-sectional design, investigated the relationship between type of compulsion (e.g., washing) and chronological age to assess the veracity of the model.

Table 1. Commonality of Obsessions and Compulsions

Ritual	Percentage	Obsession	Percentage
Washing	85	Germs/contaminants	40
Repeating	51	Fears of harm (to self or others)	24
Checking	46	Scrupulosity	13
Touching	20	Forbidden thoughts	4
Counting	18		
Ordering/arranging	17		
Hoarding	11		

These figures are from the NIMH sample (the National Institute for Mental Health) by Swedo et al. (1989), with others describing essentially the same presentation (Riddle et al., 1992; Khanna & Srinath, 1988; Thomsen & Mikkelsen, 1991).

Internalising or Externalising

As discussed earlier, previous research has established that the family environments of internalising and externalising disordered children differ (Barber, Olsen, & Shagle, 1994; Rubin & Mills, 1990, 1991). Among the internalising disorders are the Anxiety Disorders, and one among these is OCD. It can be said that OCD differs from the other Anxiety disorders in respect to its internalising status. This is largely founded by the observation that the obsessive-compulsive ritualising child may exhibit externalising as well as internalising behaviours (Rapoport, 1989).

The internalising and externalising distinction is largely based on the respective disorders being over-controlled and inner-directed, and under-controlled and outer-directed, respectively (Achenbach et al., 1992). Rothbaum et al. (1989) found that not all child psychological disorders fit neatly into these dichotomous categories, with a number of disorders expressing distinctly mixed features. Johnson and March (1992) also concluded that some disorders clearly represent characteristics of both under-control and outer-direction, and over-control and inner-direction. Obsessive-compulsive disorder is perhaps such a disorder. Evidence for behavioural under-control is characterised by the overt ritualising (e.g., obvious avoidance of any cracks in the footpath, going back and forth to class repeatedly in order to satisfy a number ritual (e.g., must do it three times), excessive handwashing and so on), and inner-directed by the covert, cognitive characteristics (i.e., obsessionality).

Indeed, under- and over-control may also be present within ritualisation itself.

Ritualising has been found to cause moderate to extreme disturbances in family routine, especially if one or more of the family are involved in the ritualisation (Rapoport, 1989).

Rapoport (1989), also found that the children tended to initially hide their rituals, often disguising hand washing for frequent voiding, or "scheduling" ritualisation for a private time. On average, it has been found that children have often been performing rituals for 4 to 6 months before their parents became aware of the problem. Teachers and peers are often even more unaware of the problem because of the child's limiting of the

observable behaviours. Parents are oftentimes baffled by this seemingly wilful control, seeing their child suppress rituals at school or with friends, but 'having' to do them at home. The children maintain that they expend enormous energy 'controlling' their behaviours in public and have to 'let go' when at home. But, should the OCD progress in severity, the child may no longer be able to resist ritualising in public. This notion of being able to control the ritualising at school is characteristic of over-control, while the inability to control once at home, or after the need to perform the rituals has intensified to the point where control is not perceived as possible, is more characteristic of under-control. Hence, OCD encompasses characteristics of both internalising and externalising.

The present study then, may expect to find that OCD is related to both internalising and externalising problems, when compared with the traditionally internalising disorder anxiety.

OCD and Anxiety

Obsessive-compulsive disorder differs from the other anxiety disorders in one fundamental way. In OCD, at a very basic level, the obsessions lead to feelings of unbearable anxiety that are extinguished, to varying degrees, through the performance of the compulsions or rituals. Like the other anxiety disorders then, obsessive-compulsive disorder has anxiety as the central activator of dysfunction, here the obsession-compulsion sequence. However, unlike the other anxiety disorders, anxiety per se is not the primary symptom. The obsession can occur seemingly devoid of anxiety, unlike, for instance, separation anxiety disorder where anxiety dominates the entire experience. In separation anxiety disorder, the child may be anxious about past separation, present separation and future possible separation from a central figure in their lives. Hence, anxiety is pervasive throughout the period of disturbance.

Disorders that feature along the anxiety spectrum (e.g., separation anxiety disorder, school phobia, OCD) have been studied in relationship to the child's family environment. Interestingly, all of the studies reported thus far have not included children diagnosed with OCD in their samples (e.g., Siqueland et al., 1996; Brady et al.,

1992; Cole et al., 1998; Spence, 1997). This repeated emittance of OCD in anxiety disorder research is interesting in that no explanation appears to be given as to why these cases are not included. It could be that the low prevalence of OCD does not provide enough participants to maintain meaningful data or statistical inference (Jensen, 1990). It could also be because the researchers recognised OCD as being significantly different from the other more researched anxiety spectrum disorders (e.g., generalised anxiety disorder, school phobia, and separation anxiety).

OCD and the Family Environment

Prior to the 1980's, researchers on OCD reported ties with strict parenting styles, and meticulous or perfectionist parents (for overview see Swedo, Rapoport, Leonard, Lenane, & Cheslow, 1989). Hoover and Insel (1984) however, found no evidence suggesting these parenting styles or characteristics were related to their child's OCD in the 174 families they interviewed. Flament and Rapoport (1984) also found no evidence to support the prevailing parenting style theories as related to childhood OCD.

Given that rituals and repetitive behaviours are so important to the ritualiser, it is often the case that families become active participants in these rituals. Allsopp and Verduyn (1990) report that 70% of the families of their 44 subjects were actively involved in the rituals; 50% of one or both parents were actively involved in completion of the rituals; and 16% of these family members provided frequent and repetitive verbal reassurances related to the rituals. Furthermore, as the rituals occupy a greater and greater percentage of activities and time, they often become a reference point for family decisions, and these decisions tie them to the ritual, further reinforcing it and making it an intricate part of family organisation (Franzblau et al., 1995). It may also put family members at risk to lose sight of their own individuality in with an increasing focus on the needs of the symptomatic child. Thus, the family may be at increased risk for becoming highly enmeshed (Goldenberg and Goldenberg, 1985).

The under-controlled and overt behaviour of the child, plus the anger and frustration that may occur as a result of not being able to perform the rituals (Rapoport, 1989), may foster family environmental behaviours which differ from the other traditionally internalising anxiety disorders. For instance, the OCD family may feel anger,

frustration, reacting later with guilt because their child cannot 'control' the ritualising behaviour (Rapoport, 1989). In terms of the family within a community, the OCD child's behaviour may become increasingly obvious (particularly the more bizarre the rituals) and may cause embarrassment, protectiveness, and increasing alienation or withdrawal from outside contact.

Obsessive-compulsive disorder has yet to be considered in terms of its interaction with the family environment, and it was the intention of the present study to investigate the family environment of children reporting OCD features. In addition, the family environment of children experiencing OCD symptoms has yet to be investigated in the context of the differences and similarities in the family environment of the other anxiety disorders. This is another aspect that was examined in the present study.

Subgroups of OCD

Husain & Kashani (1992) proposed a model of OCD in children & adolescents suggesting OCD can be divided into three subgroups. Those who can be identified as members of the first group present themselves as isolated and withdrawn, with an anxious affect. According to Husain & Kashani (1992) they may be very suspicious, which may extend to near-delusional thinking. However, it's important to note that this group would differ from schizophrenics, in that their associations are not considered truly loosened or disjointed. They are thought to have features of Asperger's Syndrome (with or without the avoidance of social interaction) and may also be mute with an agitated depression. The second group appears largely 'normal' with affects ranging from anxiety to confusion through to despair. They usually have socialised normally, but may show minor conflicts with family members. Generally they are likeable children that function in an exemplary manner at school and can be outstanding athletes. Rapoport (1983) describes this hypothesised group as 'supernormal'. The third group is highly associated with Gilles de la Tourette's Syndrome (preoccupation with coprolalia being coupled with a motor tick), and includes very few of those children and adolescents with OCD. However, a large number of those with Tourette's syndrome have associated obsessive-compulsive symptoms; for example Nee, Caine, Eldridge, & Ebert (1980) found that out of 50 consecutive Tourette's cases, 34 also had

OCD (as defined by DSM-III).

Thus far, no research has been conducted in relation to this theory of OCD subgroups. It was the intention of the present study to evaluate the possibility of these subgroupings of OCD features within a normal population.

Chapter 5

COPING AND SIGNIFICANT LIFE EVENTS

Stress Events

Another area of interest related to the study of childhood internalising disorders is the research into the effects of stress on children. As in adults, major negative life events, minor events or hassles, and disruptions in family and social supports often have a deleterious effect on children (Wills, Belchman, & McNamara, 1996). It has been established in recent research that the effects of these events, particularly if excessive, may lead to internalising disorders such as depression or anxiety (Jeney-Gammon, Daugherty, Finch, Belter, 1993; Laumakis, Margolin, John, 1998; Anonymous, Sandler, & Twohey, 1998; Zangerle & Rathner, 1997).

Initially, with the advent of stress-events scales, stress came to be seen as a state provoked by particular significant life-change events, with additive implications (e.g., Holmes and Rahe's (1967) stress-events scale listing several life events which are rated and ranked according to a particular cumulative stress score). Paykel (1974) added to the evolving stress-events theory the framework of life's entrances and exits. Hetherington (1984) studied these concepts in terms of compounding events, for example, demonstrating that children adjust more effectively to a life stress such as divorce when many other more minor stressors do not complicate the situation. McCubbin and colleagues' research (McCubbin & McCubbin, 1987; McCubbin, Patterson, & Wilson, 1983) agreed with this cumulative theory of stress-events.

Life-change events became the most widely used measure of stress in various correlation studies relating stress events scores to illness (Sorensen, 1993). Essentially, stress was viewed as the culmination of environmental change (Johnson, 1986). Paykel (1974) and Miller (1981) however, found that some stress events were negative (i.e., undesirable) while others were positive and thus desirable. For example, getting married is usually a desirable event, but it produces an exceptional amount of emotional and physiological stress. This led them to the argument that it was

perception, required adaptation, and the factor of change that precipitated individual stress.

Conversely, Weinberg and Richardson (1981) reviewed several studies suggesting that change itself was not the important issue but rather the undesirable or negative stress was the critical factor. They added that what was stressful about life events were the more detailed characteristics of the events themselves and the perceptions of the individual. Ryan (1988) criticised the use of life-events scales on two counts: (1) they do not differentiate between desirable and undesirable change, and (2) they do not allow for the stressfulness of the particular stress event to be evaluated.

A more recent study by Pearlin (1991), in observing adult roles and responses to life stresses, proposes the idea of scheduled and non-scheduled events, termed "life strains". These strains are divided into three categories capable of producing emotional distress. These include (1) daily and enduring problems; (2) predictable and regular events of the life cycle (e.g., marriage, childbirth); and (3) unscheduled and usually undesirable events (e.g., divorce, premature death). This work has led to an interest in the stress daily hassles evoke, an area beyond the scope of the present study (see Kanner, Feldman, Weinberger, & Ford, 1991, for more on this subject).

Much caution is increasingly suggested in using life events as unitary indicators of family stress (Sorensen, 1992). There are several significant empirical and methodological problems in the wholesale acceptance of the life-events theory of stress. Included are subjects' inaccurate and selective recall of events, confounding of events with the psychological and physiological symptoms they purport to predict, and ineffective checklists which produce less reliable data than other techniques, such as structured interview (Mullan, 1983; Sorensen, 1992).

The limitations of using significant life events as sole indicators of stress are serious thus, it is the intention of the present study to evaluate these events in isolation; that is, without making implications regarding family stress. Also, by separately assessing the relationship the quantity and the severity of the significant life events have on the

disorder, it may be possible to distinguish the contribution of each to disorder specific symptomatology.

Research by Jeney-Gammon et al. (1993), Laumakis et al. (1998), Anonymous et al. (1998), and Zangerle et al. (1997) suggests that a relationship exists between significant life events and anxiety. The present study will similarly evaluate the role of significant life events in combination with anxiety and OCD. In addition, as coping strategies have been found to be produced in response to significant life events and to be related anxiety (Kendall and Chansky, 1991), coping strategies as a moderator between significant life events and anxiety will be evaluated in the present study.

Coping

Coping is consistently conceptualised as the pathway by which successful adaptation to stress is achieved (Sorensen, 1992). The literature describes coping responses, strategies, styles, and resources (Dollahite, 1991), each with possible specific definitions. Coping strategies are generally characterised in the research as the methods by which coping is facilitated as opposed to the specific cognitions that make up the overall strategy (Kendall & Chansky, 1991). To further elucidate, an example of a coping cognition may be "It's not so bad, I can handle this", while the general strategy is positive self-talk.

Kendall (1985) identified a salient difference between the information processing of hyperactive (externalising) and anxious/depressed (internalising) children. An absence of thoughtful planning was characteristic of hyperactive children and active, but misguided processing characterised the anxious and depressed children. This distinction is what Kendall and Chansky (1991) believe highlights the fact that conceptualisations of coping are disorder specific. By way of examples, they explain that self-regulation strategies (e.g., "stop and think", Kendall & Braswell, 1985) suggested for impulsive children are not recommended for anxious children as their preoccupation with themselves and the task at hand may be part of the problem rather than the solution (Kendall, Howard, & Epps, 1988). It may be suggested then, based on such observation, that different coping strategies may be employed in the

internalising and externalising disorders. Thus, it may be that while anxiety and depression may relate to coping strategies consistent with internalising disorders, OCD in comparison, will show strategies suggestive of both internalising and externalising disorders.

In addition, as the family environment is an integral part of the child's world, the present study will examine the relationship coping strategies have with features of the family environment. No study has thus far researched this relationship.

Chapter 6

THE PRESENT STUDY

The Rationale and Goals of the Study

The present study has four main goals, and a number of more specific aims. The first main goal is to examine the family environment in its application to specific areas of mental health. This is done in terms of both the family system and the parenting practices used, two areas of the family environment that have not been examined together in previous research. The aim is to include a richer family environment construct that will potentially be able to provide more information about both the processes and the internal characteristics of the family.

Goal One

Within this main goal, the first specific aim is to establish if the internalising and externalising syndromes can be differentiated through their relationship with the family environment, another area that has not thus far been the focus of previous research. The second aim is to extend previous research which has examined only parenting practices (as a unitary dimension of family environment) and its relationship with anxiety. This was done by adding the family system dimension to the construct of family environment, then comparing the results with depression, OCD and normal controls. The aim is to isolate a richer view of the family environmental factors that relate to anxiety. The third aim was to extend the previous research which has examined the relationship between family environment and depression according to either the family as a system or parenting practices by examining both family dimensions. As with the previous aim, the idea is to provide a broader view of the family environmental factors that relate to depression. The fourth aim was to extend previous research on the temporal relationship between anxiety and depression, and test the theory that anxiety is a moderator between the family environment and depression.

Goal Two

The second main goal concerns the specific internalising disorder, obsessive-compulsive disorder. This disorder appears to have characteristics of internalising and

externalising in its symptomatology, an observation that has not yet come to the attention of previous research. The aim is that in comparing the family environment of OCD with the family environment of the depression and other anxiety syndromes, it may be possible to isolate the family variables that are not consistent with traditional internalising problems. Thus, it was possible to establish whether OCD has different family environment features. Another specific aim here was to test Husain and Kashani's theory suggesting there are three subgroups of OCD. Another specific aim was to see if there is a relationship between any identified subgroups of OCD and family environment variables. Another specific aim was to test the idea that OCD can be manifested in children with or without insight. Another specific aim was to test Rapoport's theory that forms of ritualisation have a particular developmental course. The idea here was to see if the particular rituals identified by Rapoport occur in particular age groups.

Goal Three

The third main goal of the present study concerns the coping strategies of children. A specific aim here was to extend the research on disorder specific coping strategies. The idea then was to compare the coping strategies most used by children experiencing anxiety and depression with those experiencing OCD. Another specific aim was to test whether family environment variables are related to the coping strategies used by children.

Goal Four

The fourth main goal concerned significant life events. A specific aim was to extend previous research that has examined significant life events as they are applied to stress and to the specific disorders of anxiety and depression. The aim was to examine the relationship between the number and severity of significant life events and anxiety, depression, and OCD syndromes. The final aim was to extend previous research on the temporal relationship between depression and anxiety. The aim was to investigate whether family environment has a relationship to depression and if this relationship is moderated by anxiety.

The Hypotheses

1. *The family environment differs for children experiencing internalising and externalising disorders.*
2. *The family environment differs for anxious, obsessive-compulsive, and depressed children.*
 - (a) *Anxiety produces more enmeshment, with less accepting and less granting of psychological autonomy on the part of the parents.*
 - (b) *Depression produces more enmeshment, conflict, a less democratic family style, and higher parental use of psychological control.*
3. *The family environment is a moderator in the relationship between child's anxiety and depression.*
4. *OCD problems are associated with internalising and externalising problems, while anxiety and depression are more highly associated with internalising problems.*
5. *Childhood OCD can be divided into three subgroups: 'overly anxious', 'super-normal', and 'similar to tourette's disorder'.*
 - (i) *The family environment is different for these three subgroups.*
6. *Some children have 'insight' into their OCD symptomatology, while some children have 'poor insight' into their OCD symptomatology (i.e., all the children do not have either 'insight' or 'poor insight').*
7. *OCD ritualisation develops with age in the following way. Pre-adolescents perform counting, checking and repeating movements. Adolescents wash and post-adolescents ruminate.*
8. *Children experiencing obsessive-compulsive disorder use different coping strategies than anxious or depressed children.*
9. *The coping strategies children use is related to their family environment.*
10. *The quantity and severity of significant life events are associated with higher levels of anxiety and obsessive-compulsive disorder.*
11. *Children's coping strategies moderates the relationship between the quantity and severity of significant life events and anxiety.*

Chapter 7
Methodology
Participants

Materials were handed out to all of the student body at the three participating schools, with the request that they be taken home to caregivers. In these materials was a sheet which provided information about the research (Appendix B), and a consent form which was to be signed and returned to the school office, should the family all wish to participate (Appendix C). One hundred and eleven children and eighty-four parents initially consented to participate in the present study.

School A was from a largely rural area in the north of greater Auckland. The school had a roll of 271 students in 1998 (the year the study was conducted). After the materials were handed out, 8 families (10 adults and 13 young people) sent back the completed Consent Forms, indicating their wish to participate. Of these, five families (six adults and eight young people) arrived at one of the scheduled times available for structured environment assessment and completed the questionnaires.

Schools B and C were both urban, and also both from the eastern-central area of greater Auckland. School B had a roll of 650 students, while School C had a roll of 662 in 1998. After distributing the handouts to all of the students at both schools, 49 from School B, and 50 from School C, chose to participate. Of those at School B, 19 adults and 23 young people attended and completed the questionnaires, while 24 adults and 41 young people were available to fill out their questionnaires at School C. In summary, 49 adult caregivers and 72 young people completed the questionnaires: 121 people in total. Parents filled in a separate questionnaire battery for each of their children participating in the study. This created a total of 75 completed parent questionnaires; with both parents of the child(ren) completing questionnaires for two of the participating families. Mothers filled out 70 questionnaires and fathers 5.

The mean age for the parents was 40.1 years ($SD = 4.55$, range 29-53) and for their children was 7.7 years ($SD = 1.66$, range 5-11). According to gender, the mean age for

mothers was 39 (SD = 4.19, range 29-48) and for fathers 47 (SD = 4.44, range 43-53). The average income of the whole sample was \$49,870 per year (SD = 17,400, range 5,000-60,000). Fifty-five percent of the sample families resided in East Auckland, 11% from North Auckland, and 35% were from West Auckland. Eighty-eight percent ($n = 66$) of parents were married, 5.3% separated ($n = 4$), 4% ($n = 3$) defacto, and 1.3% ($n = 1$) for each of those never married and divorced. Additionally, 88% of the families had the whole nuclear (both natural parents and children) in the home, while 5.3% had just the mother and child, 2.7% with a defacto parent, 2.7% with more than one natural mother and child in the home, and 1.3% with nuclear family and grandparents. Most of the participants identified themselves as Pakeha (92%), with the remaining participants identifying themselves as French ($n = 2$), Asian, ($n = 2$), Chinese ($n = 1$), and Pakistani ($n = 1$). None of the sample identified themselves as either of Polynesian or Maori descent. The majority of both participating fathers (62%) and mothers (46%) worked in professional roles, while a minority (16%) were employment in administrative roles. Of the fathers, the remaining employment roles were: labourers (4%), sales (8%), service (5%), and transport (3%). The mothers other roles were: parents (16%), clerical (4%), production (3%), sales (7%), service (4%), and students (3%).

For the children, the average age of the participant was 7.7 (SD = 1.66, range 5-11), and the mode was 8 years. Eleven percent of the children were 5 years old; 15 % were six; 18% were 7; 24% were 8; 12% were 9; 17% were 10; and 3% were 11 years old. Fifty six percent ($n = 42$) of these were female and 44% ($n = 33$) were male. The mean school year was 3.5 (Standard One) (SD = 1.65, range 1-7). The average number of siblings (excluding the participating child; other siblings participating included) was 1.7 (SD = .90, range 0-4). The majority of the sample of children were identified by their parents as Pakeha (88%), while the remainder were identified as Asian ($n = 2$), Chinese ($n = 1$), French ($n = 2$), Pakeha/Asian ($n = 1$), Pakeha/German ($n = 1$), and Pakistani ($n = 1$).

Additional information was requested of the parents as part of the demographic questionnaire regarding the incidence, and type of, significant event(s) (e.g., death of first degree relative, marriage or moving home) which had occurred in the last year.

While the majority of the sample had no significant life events occur (56%), a good proportion did report some significant event(s) (44%). The mean number of significant life events having happened in the last year for this sample was 0.6 (SD = .90, range 0-3). Of those who had a significant life event occur, the reported severity of the event ranged from mild (36%), to moderate (39%), to severe (24%).

Table 3 shows the relatives to the participating children that have been diagnosed with a particular mental disorder, as reported by the parents. As can be seen, the majority of the children's relatives have had no previous or current diagnosis. Also, of those who identified a relative with a disorder, many of them chose not to specify the particular disorder their relative had or has. It is unknown whether this is because the disorder had not been identified by a professional but the parent thought a disorder was present or if the exclusion of information was due to privacy concerns. To summarise, Table 2 shows that only 8 % of relatives had a previous diagnosis of either an anxiety or depressive disorder.

Table 2. *Diagnosed Mental Disorders in relatives to the child*

Disorder	1 st Degree Relative	2 nd Degree Relative	3 rd Degree Relative	Multiple 1 st & 2 nd Degree	No Relatives	Total
Alzheimers	-	1	-	-	-	1
Alzheimers & Parkinson	-	-	1	-	-	1
Alcoholism, Panic Disorder & Depression	-	-	-	3	-	3
Depression	2	-	-	1	-	3
No Disorder	-	-	-	-	58	58
Unspecified	-	8	1	-	-	9
Total	2	9	2	4	58	75

Table 3 provides an overall view of the disorders that had been already diagnosed in the children, as reported by parents, before the time of assessment. A vast majority of them had no previous diagnosis (94.7%), and a very small percentage had been diagnosed

with attention deficit-hyperactivity disorder, obsessive-compulsive disorder, and school phobia.

Table 3. Mental Disorders of Participating Children that were Diagnosed Prior to Assessment According to Parent Report

Disorder	Frequency	Percent (%)
Attention Deficit-Hyperactivity Disorder	2	2.7
Obsessive-Compulsive Disorder	1	1.3
School Phobia	1	1.3
No Disorder	71	94.7

Measures

There are important differences between the assessment process for adults and children (Evans & Nelson, 1986; La Greca & Stone, 1992; Roberts & La Greca, 1981). Chiefly, these differences pertain to the type of assessment used and the manner in which it is conducted. By virtue of their age and developmental level, children need self-report questionnaires tailored so that they are possible to complete reliably and in a valid way. This is especially so if the questionnaires are to be offered as part of a battery of questionnaires as in this study. If the questionnaires prove to be too taxing on the child's concentration maintenance and ability to attend, consequently there is an increased chance for inaccurate responses. In response to this concern, the following measures were selected not only based on their psychometric properties, but also for their relative brevity. Where necessary, some measures were altered slightly to facilitate reading and comprehension levels estimated to be appropriate for the youngest members of the sample (it is stated in the specific measure's section where this has occurred). Owing to this issue, reliability estimates are provided using the current sample.

La Greca and Stone (1992) assert that another basic tenet of child assessment is that it should involve multiple persons in the child's environment, including the parent and child. What parents understand to be a problem for a child may in some cases bear little relationship to the child's perceptions (Evans & Nelson, 1986), suggests that input from the child as well as significant others is important to accurately understand the problem. It is for this reason that it is important to assess how significant people in the child's life behave toward the child and how their behaviour contributes to the child's problem (La Greca & Stone, 1992). To follow are the measures used to assess first the children followed by those filled out by parents.

CHILD REPORT MEASURES

Revised Children's Manifest Anxiety Scale (RCMAS)

The RCMAS (Reynolds & Richmond, 1978) is a widely used measure of manifest anxiety in children. The RCMAS takes approximately 10-15 minutes to administer, and is designed for ages 6 to 19. The present study also used this measure to assess anxiety in five year olds ($n = 8$). It was thought that the major impediment to five year olds completing this measure was probable inability to read sufficiently. Thus, the RCMAS was read aloud to all the children who felt they could not read on their own. The consequent internal consistency reliability for the five year olds was adequate ($r = .68$).

The rater indicates whether each of the 37 descriptive statements is *true* or *false* about them. Nine lie-scale items are also included to assess the validity of the responses. Factor analysis of the RCMAS (Reynolds & Paget, 1981) revealed three subscales reflecting (a) physiological problems, (b) worry/oversensitivity, and (c) difficulty concentrating. These subscales are consistent with the findings of earlier studies (Reynolds & Richmond, 1979; Finch, Kendall, & Montgomery, 1974). Reynolds and Paget (1981) also found that the Lie scale could be divided into two further factors. One lie scale is made up of three items and comprises items which present potentially confusing concepts that may account for their being a separate factor. Each of these items presents the child with a potential double negative (e.g., "I never lie."). The other Lie scale is comprised of all the remaining Lie scale items.

Perrin and Last (1992) studied the discriminant validity of the RCMAS and found that it discriminated between a clinically referred anxiety disorder sample and controls. Reynolds and Richmond (1978) reported adequate internal consistency reliability, while Reynolds (1980) provided evidence for the construct validity of the RCMAS. Cronbach's Alpha reliability coefficients for internal consistency using the current sample was $r = .78$

Leyton Obsessional Inventory - Child Version (LOI-CV)

The LOI-CV is a self-report inventory that is a downward extension of an adult measure (Berg, Rapoport, & Flament, 1986) and has been systematically revised for use with children and adolescents. It measures subjective reports of obsessive-compulsive thoughts and behaviours, and employs either a survey form, card-sort method, or inventory form. The LOI-CV used here is a forty-four item measure scored with a “yes” or “no” response, with a “yes” requiring a further response indicating the interference the particular obsession or ritual incurs on a four point likert scale.

Studies have indicated that the LOI-CV discriminates between obsessive-compulsive adolescents and normal controls (matched on age and IQ). Retest reliabilities (5-week period) were high, with intraclass correlations of .96, .97, and .94 for “yes” scores, resistance, and interference, respectively (Berg et al., 1986). The validity of the LOI-CV was evaluated with 19 subjects in a clomipramine drug trial. Scores on the LOI-CV were compared at the 5 week mark of placebo treatment and the same 5 week mark of clomipramine treatment. The LOI-CV was found to be a valid and reliable measure of improvement while on clomipramine therapy. Correlations between different OCD measures was also high ($r = .77$ to $.89$) (Berg et al., 1986). In the present study, the inventory form was utilised with the rating of resistance omitted, as resistance has been found to be less discriminating than interference (Berg, Whitaker, Davies, Flament, & Rapoport, 1988). In this study the inventory demonstrated good internal reliability ($r = .88$).

The Self Report Measure of Family Functioning - Child (SRMFF-C)

The SRMFF (Bloom, 1985) consists of 75 items that were selected from the Family Environment Scale (Moos & Moos, 1981), Family-Concept Q Sort (Van der Veen, 1965), Family Adaptability and Cohesion Evaluation Scales (Olsen, Bell, & Portner, 1978), and the Family Assessment Measure (Skinner, Steinhaurer, & Santa-Barbara, 1983) as a result of a series of investigations of the psychometric properties of these measures. The resultant measure consists of three dimensions and 15 scales, each scale consists of five items. The Relationship dimension has six subscales (Cohesion, Expressiveness, Conflict, Family Sociability, Family Idealisation, and Disengagement)

that describe various characteristics of the relationships among family members. The Value dimension has three subscales (Intellectual, Active/Recreational, Moral/Religious Emphasis) describing family values. A prominent concern of the present study was that the children might become exhausted and therefore produce biased results, should they be required to fill in too many questionnaires. As the SRMFF-C is the longest measure, it was thought prudent to omit any sections that may not be of specific relevance to the study. The Value dimension was considered such a section. This is primarily because this study has operationalised the family environment in terms of evaluating the family as a system (i.e., the inter-relationships and family styles) and according to parent practices within the family. The Value dimension overall does not evaluate either of these constructs. However, the moral/religious emphasis subscale was included in the present study to test its relationship with OCD as OCD has been linked to familial religiosity in the past (March & Leonard, 1996). The third dimension, System Maintenance, consists of six subscales (organisation, external locus of control, democratic family style, laissez-faire family style, authoritarian family style, enmeshment) that describe the management style of the parents and the families' perceptions about who controls their lives. The wording of the original SRMFF was modified for children (SRMFF-C) by simplifying the language in the items, and simplifying the descriptive anchors to (mostly) *true* or (mostly) *false*.

On the SRMFF-C "false" was allocated a score of one and "true" a score of two, while the SRMFF was scored with "untrue of my family" as one on the likert scale, "sometimes not true of my family" as two, "sometimes true of my family" as three, and "true of my family" as four. Thus, a high score on each of the subscales corresponded with how true the subscale was for the family. Not all of the subscales were measured in the same direction, however. That is, high scores on the subscales for cohesion, expressiveness, family organisation, and family sociability show adaptive functioning on the behalf of the family. Whereas, high scores on the subscales for conflict, external locus of control, disengagement and enmeshment show maladaptive functioning. In order to make the interpretation of the results less complicated, the scores of the directional subscales were inversed so that all high scores indicated adaptive

functioning. In addition, high scores on the subscales of religiosity, family idealisation, democratic family style, laissez-faire family style, and authoritarian family style, merely show they are high on that factor. For example, a high score on religiosity would indicate that this particular family participated in religious practices, and a high score on authoritarian family style would indicate the parents in the family tended to be authoritarian and make all the rules and enforce the punishment when those rules were broken. Thus, these latter scales do not necessarily indicate adaptive or maladaptive behaviours, but rather provide characteristics of the family that are of interest to the present study.

Stark, Humphrey, Lewis and Crook (1990) investigated the psychometric properties of the scale with children and older adults. Results of the analyses of the children's ratings indicated that the Disengagement, Laissez-Faire Family Style, and External Locus of Control subscales did not meet minimal psychometric standards of reliability. Similarly, the results of the analyses on the measures completed by maternal figures resulted in the Authoritarian Family Style, Laissez-Faire Family Style, and External Locus of Control subscales also not meeting minimal reliability standards. The alpha reliability for internal consistency reliability in the present study was adequate for the parent reported SRMFF ($r = .61$) and child reported SRMFF-C ($r = .56$).

Alabama Parenting Questionnaire (APQ) - Child Version

The APQ (Frick, 1991) includes 35 items assessing five parenting constructs that past research has found to be most consistently associated with conduct problems (Shelton, Frick & Wootton, 1995). Ten items assess parental involvement (e.g., "How often do you have a friendly talk with your mum/dad?"), six items assess parental use of positive reinforcement (e.g., "How often do your parents reward or give you something extra to you for obeying them or behaving well?"), ten items assess parental monitoring and supervision (e.g., "How often do you fail to leave a note or let your parents know where you are going?"), six items assess consistency in applying discipline (e.g., "How often do your parents threaten to punish you and then not do it?"), and three items assess parental use of corporal punishment (e.g., "How often do your parents spank you with their hand when you have done something wrong?"). These distracter items have not

been reliably related to any dimensions of child behaviour thus far (Finch, 1997, personal communication).

Items assessing the first two constructs are worded in the positive direction (indicating more positive parenting) and the items assessing the latter three constructs are worded in the negative direction. The two positive parenting scales were inverted to make higher scores indicative of ineffective parenting, analogous to the other three scales. Also, included on the APQ are seven additional items measuring specific disciplines practices other than corporal punishment. These items are included as distracters so that corporal punishment items are not asked in isolation of other forms of discipline. The APQ involves four assessment formats with analogous items on each format: parent and child global report forms, and parent and child telephone interviews. The child-report items are all worded to refer to parenting in general within the family (as illustrated above). The only exceptions are that items measuring parental involvement are repeated once with the child answering for his or her mother and answering again for his or her father, if there is a father-figure in the home. Items on the global report forms are rated on a 5-point frequency scale (1=Never to 5=Always) to represent the "typical" frequency with which the parenting behaviour is exhibited in the home. The internal consistency reliability on the APQ was good for both parent reports ($r = .83$) and child reports ($r = .81$).

Children's Depression Inventory (CDI).

The CDI (Kovacs, 1981) is based on the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and is the most commonly used self-report measure of depression for children (Ollendick & Prinz, 1997). The CDI includes 27 items on a 3-point scale related to the cognitive, affective, and behavioural signs of depression. Each item refers to one symptom and assesses its presence and severity during the preceding two weeks. Studies show that the items fall into two factors: the first factor measures self-deprecation and self-criticism; the second factor measures dysphoric mood (Saylor, Finch, Spirito, & Bennett, 1984). The scale has high internal consistency, moderate re-test reliability, and correlates in the expected directions with measures of related constructs (self-esteem, negative attributions, and hopelessness;

Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983; Saylor, Finch, Baskin, Furey, & Kelly, 1984; Kendall, Cantwell, & Kazdin, 1989). The internal consistency reliabilities (Cronbach's alpha) for the current sample was adequate ($r = .80$).

Brief Questionnaire

The Brief Questionnaire is a 16 item measure using a five point likert scale developed for the purposes of this study to assess features that are theorised to distinguish the three subgroups of OCD (see Appendix D for both parent and child versions). Fourteen items were constructed to complement and add to the information obtained through administering the LOI-CV and CBCL, and are based on the research on OCD typology by Rapoport (1986), Husain and Kashani (1992), and Jensen (1990). The items were chosen according to the descriptors used by these researchers to characterise the three subgroups. Where possible, the actual language used by these researchers to describe the three subgroups was used. The remaining two items assess the status of the child's recognition that the obsessions and compulsions are excessive or unreasonable, as the DSM-IV (American Psychiatric Association, 1994) suggests. The wording of these two items was again taken from the theoretical source (in this case DSM-IV) in an effort to keep the theoretical characteristics and the questionnaire as closely matched as possible. The internal consistency reliability (Cronbach's alpha) was found to be somewhat adequate ($r = .56$).

Kidcope

The Kidcope (Spirito, Stark, & Williams, 1988) is a 15 item checklist constructed to assess the frequency of the use of ten different coping strategies. The child chooses a stressor that has been present sometime in the past month. Then, he or she rates the frequency of each coping strategy in dealing with the stressor, using a 4-point scale. A principal-components analysis by Vernberg, La Greca, Silverman, and Prinstein (1996) yielded four types of coping strategies: six items measuring absence of positive coping, three items measuring blame/anger, three items measuring social withdrawal, and three items for wishful thinking. Initial studies indicate adequate re-test reliability and

moderate to high correlations with other measures of coping (Spirito et al., 1988; Spirito, Stark, & Knapp, 1992). Internal consistency reliability (Cronbach's alpha) was not found to be adequate ($r = .38$) in this study. The data from the Kidcope was still used however, as this was the only measure in the present study of child coping strategies, and though this is a limitation, the present study results may provide valuable information to future research where internal reliability is better established.

PARENT REPORT MEASURES

Child Behaviour Checklist - Parent Report Form (CBCL)

The CBCL (Achenbach & Edelbrock, 1983; Achenbach, 1991) is designed to obtain parents' reports of their children's social competence and behavioural or emotional problems. Parents provide information for 20 competence items and 118 problem items plus two open-ended items.

The problem items for the CBCL were derived from descriptions of child and adolescent problems in clinical case records and consultation with mental health professionals (Achenbach, 1966; Achenbach & Lewis, 1971). Items were designed to avoid redundancy and to minimise the level of inference required. Problem items include both internalising and externalising problems which are rated on a 3-point scale for how true the problem has been for the past six months. Parents also provide information on 20 competency items covering the child's participation in activities and sports, involvement with social organisations and friends, and school performance.

Parents' responses are scored on the Child Behaviour Profile, which has separate forms for each gender for ages 4-11, and 12-18. The profile yields scores for two broad band factors. The first factor, Total Competence, is comprised of three competence scales titled Activities, Social, and School; the second factor, Total Problems, has two general scales which separate into Internalising and Externalising problems, while there are a further nine narrow-band syndrome scales. The 1991 syndrome scales were derived from principal components analyses of CBCLs completed for 4,455 clinically referred children. Internalising and Externalising scales were derived from second-order

principal factor analysis of the narrow-band scales. The 1991 Profile has the same scales for all groups normed separately for each sex for ages 4-11 and 12-18. The Profile also provides raw scores, normalised t scores, and percentiles for all of the competence and problem scales by gender and age groups. Clinical and borderline ranges indicate scores that best separated the referred from nonreferred children.

Achenbach and Edelbrock (1983) and Achenbach (1991) reported extensive research on the reliability and validity of the CBCL items and the 1991 Profile. All 20 CBCL competence items and 113 of the 118 problem items were significantly associated with clinical status. All of the CBCL scales successfully discriminated between referred and nonreferred samples. Correlations between CBCL scores and the Conners Parent Rating Scale (Goyette, Conners, & Ulrich, 1978) and the Revised Behaviour Problem Checklist (Quay & Peterson, 1987) were high (range: .52 to .86) for total problems and moderate to high for similar narrow-band syndrome scales, demonstrating that the CBCL is measuring similar constructs. In this study, the total reliability coefficient ($r = .8713$) was found to be adequate. The internal consistency reliability coefficients for the internalising and externalising scales were good ($r = .89$ and $r = .93$, respectively), as was the total CBCL scale ($r = .87$).

Parent Report of Anxiety

Specific CBCL questions were selected to create a parent report on their child's anxiety symptomatology. The Anxious/Depressed CBCL subscale was not used because it was a measure of anxiety and depression in unison, whereas separate measures were required for the present study. Sixteen items from the CBCL (see Appendix E for additional information on the CBCL items selected) related to anxiety symptomatology and according to DSM-IV criteria, were selected for this measure of parent reported anxious behaviour. Alpha reliability analysis for the scale found high internal consistency ($r = .83$).

Parent Report of Depression

Sixteen items relating to depressive symptomatology; according to DSM-IV criteria, were selected from the CBCL to provide a parent report on their child's possible

depressive behaviours (see Appendix E for additional information on the specific CBCL items selected). The internal reliability (alpha coefficient) for the scale was adequate ($r = .75$)

Parent Report of OCD

Similarly, a parent's report on their child's OCD symptomatology was derived from the relevant CBCL items. These items were selected according to the DSM-IV criteria for OCD and were twelve in total (see Appendix E for more information on the specific questions selected). The internal reliability for these items was adequate ($r = .72$).

The Self-Report Measure of Family Functioning (SRMFF)

The SRMFF (parent version) is the same as that mentioned in the child measures section above. Included in that section is information on this measure. The parent internal consistency (alpha coefficients) is shown, by subscales, in Table 4.

Alabama Parenting Questionnaire

Information on the parent version of the APQ is included in the section on the APQ child version in the child measures section earlier. The internal consistency reliability (alpha coefficients) for the parent report version of the APQ are in Table 5.

The Children's Report of Parenting Behaviour Inventory (CRPBI)

The CRPBI- Parent Version (Schluderman & Schluderman, 1970) is a 30 item, widely used questionnaire designed to assess parents perceptions of their behaviour toward their children along three subscales: Psychological Control, Acceptance, and Firm/Behavioural Control. Initially intended for the use of children to report on their perception of parental behaviours toward them, it was adapted to be used as a parental rating by both Siqueland, Kendall, and Steinberg (1996) and Schwartz, Barton-Henry, and Pruzinsky (1985). This adaptation comprised of changing the wording to facilitate its use by parents. Schwartz, Barton-Henry, and Pruzinsky (1985) found the internal consistency of the subscales ranged from .65 to .74. Only the parents completed the CRPBI due to considerations regarding maintaining concentration level and avoiding

excessive fatigue in the children given they were already completing a lengthy battery of assessments. The internal consistency for this sample was adequate ($r = .71$).

Brief Questionnaire - Parent Version

The Brief Questionnaire is similar to the child's measure as described earlier. Internal consistency reliability was adequate for the parent version of the Brief Questionnaire ($r = .80$).

Procedure

Potential participating schools were solicited by various means and were from various locations in the greater Auckland area. The first step usually consisted of a telephone call to the Principal or Deputy Principal of all primary schools featured in the national register of schools that had a roll of 500 or more and were in the greater Auckland region. Approval was sought from both the administration and the Board of Trustees of each of the schools. A formal package of materials was then forwarded to each of the interested schools. This package consisted of a) the materials to be distributed to the students, and their families, of the school (Information Sheet (see Appendix A), Consent Forms (see Appendix B)), and b) a summary of the objectives of the study, what may be expected to be accomplished by the study, contact details, and the justification of the research (see Appendix C). Of these, three schools chose to participate, with a fourth as a backup should more participants be required.

Contact phone numbers of the researcher and research supervisor were included in the information supplied should there be any inquiries. There were approximately ten phone calls of inquiry which all resulted in the participation of those families.

Information sheets and Consent forms were distributed to the entire student body at each of the schools with instruction from the Teacher to be taken home for parents to also read. Within the materials were instructions for the completed Consent forms (alone) to be returned to their school's office should they wish to participate. The

forms were collected from the offices approximately two weeks after their distribution, then any others collected as they came in. All parents who returned completed Consent forms were then telephoned in order to a) answer any remaining questions they may have and to b) schedule a time (from a fixed set available) for the assessments to take place.

All of the participating schools donated the use of one of their vacant rooms for the use of group administration of the questionnaires outside of school hours (a condition the schools, and most of the parents, made during negotiations). Generally, the assessments were scheduled over a week for each school beginning at approximately 3.30pm, thus allowing some free time for the kids before assessment began (school finished at 3pm). Parents and children aged seven or older were required to attend one of the group assessment times throughout the week, while those children under the age of seven were required to attend two times. This was primarily because assessment took double the time for this group of participants. These two times were not required to be consecutive, and (as for the other child participants) the parent(s) were not *required* to be there during assessment, but of course could be if they so chose.

One room was used (mostly due to the fact that only one was available at each school) to administer to three groups of participants. The first group was made up of parents, the second, seven to ten year olds, and the third, of the under seven years of age. Each of these groups was segregated from the others as much as was physically possible, with the parents being stationed as far from the kids as practicable. The parents were also seated facing away from their participating children in an effort to discourage communication during assessment. In one school it was possible to have the under sevens in a separate adjoining room.

The researcher and a volunteer research assistant (a training primary teacher) supervised and read the assessments. Only the under sevens and those who had problems with reading were read the items from each questionnaire. There were no more than ten children aged seven or older, ten parents, and six children under seven in each group assessment.

Before assessment began the participants were informed of several things. The research assistant was available to answer any questions the participants might have during the assessment process, but that the researcher was interested in their interpretation of the question and therefore their answer to that interpretation of the question. They were also informed that should they be unsure of an answer they should choose the option which *best* described them or their feelings/experiences. The participants were instructed to do the best that they could and to read each item.

The parent group and the seven-to-ten year old group were then instructed to start and continued to respond to the self-report questionnaires in silence until they were finished and were free to leave.

Meanwhile, the under seven group was read aloud the instructions for each questionnaire followed by the questions themselves. Some of the questions were asked to be further explained, which the researcher did whilst maintaining the integrity of the question, and not interpreting its meaning.

Upon completion of the questionnaires the parent participants were informed that they would be telephoned after the completion of the thesis and asked if they wished to have a copy of the results. It was emphasised that the results were to be the general results using the whole sample, not those of themselves or their child specifically.

Design and Plan of Analysis

Design

The design of the present study was cross-sectional in nature. As a specific and brief period of time was allocated to the completion of the present study (one year), this design enabled data to be collected in a single assessment period, while allowing a cross-section of ages in the children. A cross-section of ages allowed the present study to evaluate a certain hypothesis (specifically, hypothesis seven) and the other hypotheses across varying ages of childhood, therefore facilitating the reduction of possible sample bias. That is, children of different ages may provide more valid information about the 'childhood' population of 5 to 11 year olds. In addition, the present study chose to sample from the general population, with the intention of enabling generalisation of the findings to the general population. However, given informed consent procedures, the issue of self-selection was acknowledged.

The constructs of anxiety, depression and OCD were assessed using the whole sample. This was done so that these constructs could be evaluated in terms of a continuum of child and parent reported symptomatology. This meant that anxiety, for example, could be evaluated according to its relative increases or decreases in its relationship with the other constructs in the present study. It may be that the findings then, are more generaliseable to the general as opposed to solely a clinical population.

Plan of Analysis

In order to test hypothesis one, regarding the possible differences in family environment between internalising (the Withdrawal, Somatic Complaints, and Anxious/Depressed CBCL subscales) and externalising problems (the CBCL Delinquent and Aggressive Behaviour subscales), Pearson product moment correlations were calculated. The correlations that were significant were then entered together into multiple standard regressions (discussion on these to follow). All multiple regression used in the following analyses of the hypotheses used multiple standard regression where the correlated variables were entered together, that is, not in a stepwise manner, unless they are specified as hierarchical. Pearson correlations were used in order to

lessen the amount of variables being entered into each regression (particularly so Type Two errors were less likely to occur).

Raw CBCL scores were used for internalising and externalising scores. Achenbach (1991) also suggests in the manual for the CBCL that raw scores be used for empirical research.

Multiple standard regressions were then used to test how well the family environment variables could predict internalising and externalising problems. Six multiple regressions were calculated using only the significantly correlated family environment, internalising and externalising variables. The first three involved the internalising disorder criterion variable, and assessed (1) the parent's report of the family environment as a predictor of internalising, (2) the child's report of the family environment as a predictor of internalising, and (3) both the parent and child's reports of the family environment as predictors of internalising. The second three multiple regressions used the same report structure to assess the predicting ability of family environment to the externalising disorder criterion variable. That is, multiple regressions that assessed (1) the parent's report of the family environment as a predictor of externalising, (2) the child's report of the family environment as a predictor of externalising, and (3) both the parent and child's reports of the family environment as predictors of externalising. These multiple regressions allowed the study to assess the predictive relationship between family environment and the externalising and internalising syndromes from the perspective of the child, the parent, and the child and parent together, in order to see the perceptions of the family environment from each of the available sources as well as these combined.

Hypothesis two was concerned with identifying the Family Environment variables that correlate with Anxiety, OCD and Depression.

Hypothesis three, investigating the family environment as a moderator in the relationship between anxiety and depression, was evaluated according to the methodology suggested by Baron and Kenny (1986). As both the moderator variable

(family environment) and the independent variable (anxiety) were continuous, and it was expected that the independent variable (anxiety) and the dependent variable (depression) varied linearly with respect to the moderator (family environment), hierarchical multiple regression was used. Specifically, this methodology required step one of the hierarchical regression to be depression (DV) regressed on anxiety (IV), then step two was to regress depression (DV) on both anxiety (IV) and the correlated family environment variables (moderator). Step three then, involved first calculating the standard deviation scores of the anxiety (IV) variable and correlated family environment variables (moderator). This was done by subtracting the mean of each respective variable from each of the participants scores on that variable in order to obtain forced linearity. The anxiety (IV) deviation scores were then multiplied with each of the family environment (moderator) deviation score variables, in order to create the interaction products (as opposed to the interaction itself), which were then entered into step three of the hierarchical regression.

This methodology thus allowed the effects of anxiety (IV) and the family environment (moderator) to be linearly partialled from the interaction products, therefore allowing for the production of the interaction itself. Eight hierarchical regressions were computed in total in order to encompass both the parent and child reports of not only family environment, but also anxiety, depression and OCD, and to evaluate all possible combinations of these.

Hypothesis four, regarding the relationship OCD has with Internalising and Externalising, was investigated using linear multiple standard regressions. Pearson product moment correlation coefficients were first computed between internalising and externalising total scores and anxiety and OCD total scores in order to establish the significant correlations that would be entered into the respective multiple regressions. Pearson correlations were used so that the number of variables entering the regressions could be reduced, and so that it could be assured that those that entered were at least significantly correlated and thus more likely to have predictive power (i.e., reduce Type Two error).

Multiple standard regressions were then conducted first with internalising regressed on anxiety and OCD, then a second multiple regression was calculated for externalising on anxiety and OCD. As there are both parent and child reports on anxiety and OCD, both of these sources were used in the separate multiple regressions.

Hypotheses five to seven could not be statistically investigated due to the OCD sample size being too small ($n = 11$). This was especially so because the main bases of these investigations required dividing the OCD sample into groups, and these groups would have been far too small. Any statistics then, would not have been empirically sound due to not having the statistical power for inference, making it both invalid and unreliable.

Hypothesis eight refers to the specific coping strategies related to total scores on OCD, anxiety, and depression, as they relate to internalising and externalising. Pearson product moment correlation coefficients were first computed so that only the coping strategies that were significantly correlated with OCD, anxiety and depression respectively were entered into the multiple regressions. The justification for using these correlations is as previously mentioned.

Six multiple standard regressions were then possible: one each for child (1) and then parent (2) reported OCD, child (3) and parent (4) reported anxiety, and child (5) and parent (6) reported depression. By using separate linear multiple regressions, it was possible to assess which specific coping strategies predicted OCD, depression, and anxiety so that evaluation of these coping strategies according to the specific problem could be made.

Hypothesis nine concerned the relationship child reported coping strategies has with the parent and child reported family environment. What was of interest to the present study was which parent or child reported family environment variables could predict specific coping strategies, and this was assessed through the use of multiple regressions. Separate multiple regressions were conducted for both the parent and the child reports of the family environment for each of the four coping strategies. Hence, there were

eight multiple regressions conducted in total. Again, Pearson's correlations were used to establish the correlations between these two constructs so that a minimum of variables would be entered into the multiple regressions.

Hypothesis ten, regarding the quantity and severity of significant life events as associated with higher levels of parent and child reported anxiety and OCD, was also established. Pearson correlation coefficients were again used to establish those variables that significantly correlated with the quantity and severity of significant life events.

Hypothesis eleven concerned how the children's coping strategies moderated the relationship between the quantity and severity of significant life events and anxiety. This hypothesis was investigated according to the same methodology suggested by Baron and Kenny (1986) previously discussed under Hypothesis 3. Separate hierarchical regressions were undertaken for quantity and severity of significant life events, as also with parent and child reports of anxiety.

Chapter 8

RESULTS

Descriptive Analyses

As Table 4 shows, the mean total RCMAS, CDI and LOI-CV scores for males and females did not differ dramatically (p 's > .05), and a significant difference was not found between scores by the two genders. Differences were also not found on these same measures when the sample was analysed according to the child's age.

Table 4. Means and standard deviations of child reported anxiety, depression and OCD according to child's gender and age.

Measures (Raw scores)	Male Child		Female Child	
	Mean	SD	Mean	SD
RCMAS (Anxiety)	14.469	8.211	14.677	9.918
CDI (Depression)	8.656	5.677	8.487	7.489
LOI-CV (OCD)	36.080	20.392	31.929	18.917

NB. SD = Standard Deviation

In addition, Table 5 shows the central tendency and spread of both the parent and child reports of anxiety, depression and OCD, according to the age of the child. As can be seen, parent reported anxiety and OCD is higher for six year olds and eleven year olds, while parent reported OCD is also higher in eight year olds. For ten year olds, parent reported OCD means are lower than the other parent reported OCD means. None of these apparent differences however, were found to be significant (p 's > .05). In addition, child reported anxiety, OCD and depression appears higher for nine year olds, and child reported anxiety and OCD also seems higher for eleven year olds. Again however, none of these differences in age were found to be significant (p 's > .05).

Table 5. Means and standard deviations of parent and child reports of anxiety, depression, and OCD according to child's age.

Age		Parent			Child		
		Anxiety	OCD	Depression	Anxiety	OCD	Depression
<i>Five</i>	M	14.800	34.800	11.125	4.000	1.375	2.750
	(n=8) SD	5.975	21.730	6.512	2.726	1.302	2.550
<i>Six</i>	M	19.500	51.286	9.909	3.364	1.727	2.181
	(n=11) SD	5.949	13.865	6.534	4.130	2.901	2.359
<i>Seven</i>	M	14.500	34.750	7.000	3.692	1.769	1.384
	(n=14) SD	10.732	22.601	4.767	3.351	2.088	1.895
<i>Eight</i>	M	16.929	32.933	10.875	3.647	2.056	2.556
	(n=18) SD	11.861	18.760	8.382	3.334	2.600	3.240
<i>Nine</i>	M	13.250	27.200	6.125	6.889	3.444	4.000
	(n=9) SD	4.062	15.975	7.415	7.149	3.283	4.093
<i>Ten</i>	M	8.846	25.454	5.833	4.091	2.769	2.167
	(n=13) SD	7.081	17.902	4.589	4.277	2.920	2.823
<i>Eleven</i>	M	17.000	37.500	8.000	10.500	4.500	4.500
	(n=2) SD	.000	30.406	7.071	2.121	.707	.707

NB. M = Mean, SD = Standard Deviation.

Table 6 shows the means and standards deviations for parent reported demographic information according to parent reported total anxiety, depression and OCD scores. In addition, Table 7 shows the means and standard deviations for parent reported demographic information according to child reported total anxiety, depression and OCD scores. No significant differences were found for either parent or child reported anxiety, depression or OCD (p 's > .05).

Table 6. Mean and standard deviations of parent reports of anxiety (CBCL-Anxiety), depression (CBCL-Depression) and obsessive-compulsive disorder (CBCL-OCD) according to demographic information.

Demographic	Anxiety			Depression			OCD		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Parent									
Mother	15.12	8.87	59	8.45	6.55	65	34.65	19.47	49
Father	6.50	8.27	4	10.50	9.18	4	24.50	20.82	4
Parent(s) Age									
30-35	15.70	4.00	10	9.80	7.07	10	40.75	18.48	4
36-40	15.58	11.36	24	8.38	7.52	26	34.05	20.39	19
41-45	13.19	7.72	26	7.80	5.38	30	31.30	19.82	27
46-50	13.00	18.38	2	9.00	8.49	2	46.50	16.26	2
51+	18.00	0.00	1	23.00	0.00	1	48.00	0.00	1
Suburb									
East	14.39	9.75	38	8.10	6.34	40	31.97	19.27	32
North	14.83	7.88	6	9.00	8.36	6	60.0	0.00	1
West	14.84	8.21	19	9.26	6.99	23	35.65	19.86	20
Marital Status									
Defacto	16.00	5.66	2	11.33	3.21	3	27.00	0.00	1
Divorced	17.00	0.00	1	13.00	0.00	1	59.00	0.00	1
Married	14.82	9.32	55	8.62	6.93	60	34.69	19.52	48
Never Married	17.00	0.00	1	7.00	0.00	1	22.00	0.00	1
Separated	9.25	7.93	4	5.00	4.83	4	11.50	10.61	2
Number of Siblings									
None	20.50	3.87	4	10.00	3.46	5	40.00	25.46	2
One	14.80	7.15	25	7.79	5.48	28	37.52	18.44	21
Two	14.74	11.30	23	9.04	6.79	26	32.95	22.69	19
Three	13.22	8.36	9	9.88	11.37	8	31.89	12.73	9
Four or more	4.00	4.24	2	4.95	4.50	2	7.50	7.78	2
Income									
\$5,000-\$15,000	5.67	9.82	3	9.00	1.73	3	22.00	0.00	1
\$15,000-\$20,000	18.33	1.15	3	12.00	2.55	5	41.75	11.84	4
\$20,000-\$30,000	0.00	0.00	1	5.00	5.66	2	-	-	0
\$30,000-\$40,000**	11.00	8.25	7	3.14	3.48	7	16.20	9.86	5
\$50,000-\$60,000	13.50	3.42	4	13.00	5.70	5	42.50	17.67	2
\$60,000+	15.89	9.22	45	8.66	7.17	47	35.15	20.36	41
Ethnicity									
Asian	6.67	11.55	3	11.75	2.36	4	32.50	7.78	2
Indian	7.00	0.00	1	0.00	0.00	1	30.00	0.00	1
European	21.33	6.43	3	8.67	6.51	3	36.00	31.11	2
Pakeha	14.77	8.85	56	8.38	6.84	60	33.94	20.01	48
Other	-	-	0	15.00	0.00	1	-	-	0

*All means and standard deviations are rounded to the nearest first significant figure.

** There were no participants in the income bracket of \$40,000 to \$50,000.

Table 7. *Mean and standard deviations of child reports of anxiety (RCMAS), depression (CDI) and obsessive-compulsive disorder (LOI-CV) according to parent reported demographic information.*

Demographic	Anxiety			Depression			OCD		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Suburb									
East	4.87	4.77	39	2.45	2.93	40	2.40	2.77	40
North	3.38	2.88	8	2.63	2.39	8	1.63	1.51	8
West	3.75	3.86	24	2.48	3.02	25	2.19	2.62	26
Marital Status									
Defacto	8.33	3.06	3	5.33	0.58	3	3.67	2.08	3
Divorced	12.00	0.00	1	4.00	0.00	1	5.00	0.00	1
Married	4.02	4.30	62	2.38	2.91	64	2.17	2.66	65
Never Married	2.00	0.00	1	0.00	0.00	1	0.00	0.00	1
Separated	2.00	0.00	1	0.00	0.00	1	0.00	0.00	1
Number of Siblings									
None	4.20	2.77	5	2.20	1.92	5	1.00	1.22	5
One	6.43	5.18	28	3.32	3.17	28	3.46	3.11	28
Two	3.72	3.25	25	2.41	3.02	27	1.93	2.19	28
Three	1.09	0.70	11	0.73	1.10	11	0.91	1.14	11
Four or more	0.50	0.71	2	2.00	1.41	2	0.00	0.00	2
Income									
\$5,000-\$15,000	3.50	2.12	2	0.67	1.15	3	1.67	1.53	3
\$15,000-\$20,000	7.60	3.91	5	2.40	1.52	5	3.20	2.28	5
\$20,000-\$30,000	6.00	4.24	2	5.50	0.71	2	2.00	1.41	2
\$30,000-\$40,000**	3.38	2.77	8	0.50	1.41	8	1.38	1.85	8
\$50,000-\$60,000	2.60	2.88	5	1.20	1.30	5	0.60	0.89	5
\$60,000+	4.29	4.65	49	2.92	3.14	50	2.49	2.86	51
Ethnicity									
Asian	6.33	2.31	3	2.75	2.50	4	2.50	0.58	4
Indian	2.00	0.00	1	0.00	0.00	1	1.00	0.00	1
European	4.67	2.89	3	2.67	2.89	3	2.33	4.04	3
Pakeha	4.32	4.45	63	2.53	2.94	64	2.28	2.65	65
Other	0.00	0.00	1	0.00	0.00	1	0.00	0.00	1

*All means and standard deviations are rounded to the nearest first significant figure.

** There were no participants in the income bracket of \$40,000 to \$50,000.

Pearson product moment correlation coefficients (r) were computed to indicate potential relationships between parent reported demographics information, such as gender of child and parent, and the family environment on each of the SRMFF, APQ and CRPBI subscales, according to the parents reports. Parent reports of the family environment are only displayed as the demographic information was only reported by the parents, and the child's report of the family environment according to this demographic information is displayed later in the results section. As can be seen in Table 8, and in terms of significant findings, age of the child correlated positively with Enmeshment and Poor Supervision and negatively with Involvement and the level of total OCD. The age of the parent was negatively correlated to both Family Sociability and Firm Control. Gender of the child was not correlated with any of the Family Environment subscales. The number of siblings the child had correlated positively with Cohesion, an Authoritarian family style and correlated negatively with Psychological Acceptance. The number of significant life events reported by the parents as having occurred in the family within the past year was negatively correlated with no Conflict, family Organisation, lack of parental Involvement with the child, and lack of positive reinforcement. They were also positively correlated with psychological control. The severity rating of the significant life events was negatively correlated with familial no Conflict, family Organisation, no External Locus of Control, lack of parental Involvement with the child, and lack of positive reinforcement. There were no positive correlations.

Table 8. *Pearson correlations for specific parent reported demographic information and Significant Life Events (S.L.E.) according to parent reported Family Environment Variables (or subscales).*

	Age of Child	Age of Parent	Gender of Child	No. of Siblings	Number of S.L.E.	Severity of S.L.E.
Cohesion	-.003	.040	-.073	.278*	-.166	-.190
Expression	.045	.048	.053	.151	.042	-.063
No Conflict	.213	.005	.019	-.036	-.271*	-.299*
Religious Emphasis	.169	.154	-.076	.076	-.180	-.165
Organisation	.151	-.213	-.100	.100	-.278*	-.242*
Family Sociability	-.106	-.411**	.070	.050	.006	-.065
No External Locus of Control	.195	.267*	.065	.161	-.278*	-.273*
Family Idealisation	-.042	-.166	-.118	-.022	-.092	-.123
No Disengagement	.162	-.026	-.051	-.039	.059	.030
Democratic Family Style	-.226	-.164	.172	.143	-.238	-.232
Laissez-faire	.177	.157	-.019	.021	-.069	-.100
Authoritarian	.103	.089	.106	.303*	-.125	-.030
No Enmeshment	.347**	.086	-.072	.091	-.124	-.078
Psychological Control	.067	-.118	-.053	.147	.287*	.192
Acceptance	-.144	-.070	.095	-.239*	-.148	-.116
Firm Control	-.115	-.253*	.074	.125	-.105	-.067
Lack of Parental Involvement	-.508**	-.032	-.033	-.016	-.351**	-.346**
Lack of Positive Reinforcement	-.104	.035	.036	-.078	-.282*	-.281*
Poor Supervision	.292*	.075	.033	.117	.115	.045
Inconsistent Discipline	-.003	.192	.037	-.074	-.127	-.092
Corporal Punishment	-.183	-.091	.023	-.176	.135	.037
Other Punishment	-.063	-.078	.143	-.035	.046	.071
Anxiety	-.160	.004	.191	.041	-.124	-.074
Depression	.354	-.195	.027	.031	.516	.249
OCD	-.609*	-.041	.007	.082	-.188	-.134

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The Hypotheses

Hypothesis One:

The Family Environment differs for children experiencing Internalising and Externalising Disorders.

Multiple standard regression was used to assess whether family environment variables predicted scores on internalising and externalising. Only those family environment variables that correlated with either internalising or externalising problems were entered into the regressions, as seen in Tables 9 and 10. No child reported family environment variables were correlated with internalising problems, so only the correlated parent reported family environment variables of lack of parental involvement, lack of positive reinforcement and no external locus of control were entered into the first multiple regression. The results indicated that the overall variance explained was .13 and that the parent reported family environment variable of no external locus of control significantly predicted internalising problems ($\beta = .27, p < .03$).

Both parent reported and child reported family environment variables correlated with externalising problems so one multiple regression used child reports and the other remaining regression used parent reports of family environment. The child reports correlated with internalising along the following family environment variables: family sociability, no enmeshment, lack of father's involvement, poor supervision, corporal punishment, and other punishments. The results of the multiple regression found the overall variance explained was .41 and that family sociability ($\beta = .23, p < .05$), lack of father's involvement ($\beta = .24, p < .04$), and other punishment ($\beta = .37, p < .003$) predicted externalising problems. The parent reports of family environment that correlated with externalising problems were on the following family environment variables: lack of parental involvement, lack of positive reinforcement, poor supervision, inconsistent discipline, corporal punishment, cohesion, conflict, family

idealisation, and psychological control. However, the overall multiple regression yielded no significant results.

In conclusion then, it could be said that increases in parent reported no external locus of control predicted increases in internalising scores. Also, increases in child reported family sociability, lack of father's involvement and the use of other punishment practices (i.e., not corporal punishment) predicted increases in externalising scores. Thus, internalising and externalising can be seen to have different predictors from the family environment therefore this hypothesis is supported.

Table 9. Pearson Correlations of Internalising and Externalising Problems according to scores on parent reports of the Family Environment subscales.

Subscale	Internalising	Externalising
Cohesion	-.149	-.348**
Expression	.171	.013
No Conflict	.087	-.332**
Religious Emphasis	-.085	-.148
Organisation	-.177	.011
Family Sociability	-.190	-.151
No External Locus of Control	.282*	.019
Family Idealisation	-.145	-.279*
No Disengagement	.136	.009
Democratic Family Style	.155	-.022
Laissez-faire	.018	.124
Authoritarian	-.084	-.188
No Enmeshment	.082	.037
Psychological Control	.220	.283*
Acceptance	.055	.147
Firm Control	.146	.169
Lack of Parental Involvement	-.245*	-.264*
Lack of Positive Reinforcement	-.248*	-.262*
Poor Supervision	.219	.272*
Inconsistent Discipline	.046	.337**
Corporal Punishment	.076	.341**
Other Punishment	.030	.195

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 10. *Pearson correlations of Internalising and Externalising Disorders according to scores on child reports of the Family Environment subscales.*

Subscale	Internalising	Externalising
Cohesion	-.104	.220
Expression	.109	.185
No Conflict	.063	-.089
Religious Emphasis	-.034	-.089
Organisation	.021	.118
Family Sociability	.019	.291*
No External Locus of Control	.103	.095
Family Idealisation	-.087	.031
No Disengagement	.087	.078
Democratic Family Style	.076	.178
Laissez-faire	.065	-.086
Authoritarian	.006	.060
No Enmeshment	.077	-.291*
Lack of Mother's Involvement	.006	.135
Lack of Father's Involvement	-.059	.284*
Lack of Positive Reinforcement	.050	.192
Poor Supervision	.138	.257*
Inconsistent Discipline	.088	.201
Corporal Punishment	.112	.449**
Other Punishment	.216	.385**

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Two:

The Family Environment differs for Anxious, OCD, and Depressed children.

- (a) *Anxiety is predicted to a greater extent by enmeshment, with less accepting and less granting of psychological autonomy on the part of the parents.*
- (b) *Depression is predicted to a greater extent by enmeshment, conflict, a less democratic family style, and higher parental use of psychological control.*

As with the previous hypothesis, the family environment was reported by both the parents and the children. Similarly, anxiety, depression and OCD was also separately reported by parents and children.

Anxiety

As shown in Table 11, five child reported family environment variables were correlated significantly with child reported anxiety. No conflict, no external locus of control, no disengagement, and laissez-faire family style were negatively correlated and lack of mother's involvement was positively correlated. However, the multiple regression was not significant ($p > .05$).

No external locus of control was the only parent reported family environment variable correlated with parent reported anxiety, and was correlated in the positive direction, as seen in Table 11. Multiple regression found increased levels of no external locus of control to predict increased parent reported anxiety ($R^2 = .08$, $\beta = .28$, $p < .02$).

In addition, a multiple regression was conducted where both the correlated parent reported and child reported family environment variables previously mentioned were entered with child reported anxiety. Results showed that when all of these variables were entered together, no variables significantly predicted child reported anxiety ($p > .05$).

Obsessive-Compulsive Disorder (OCD)

As seen in Table 12, the child reported family environment variable no enmeshment was negatively and corporal punishment were significantly positively correlated with child reported OCD. However, the multiple standard regression found neither of these variables predicted child reported OCD ($p > .05$).

The parent reported family environment variables of lack of parental involvement and lack of positive reinforcement were negatively correlated, while expressiveness, no external locus of control, and psychological control were positively correlated with parent reported OCD, as can be seen in Table 11. Upon completion of the multiple regression, none of these variables were found to predict parent reported OCD (p 's $> .05$).

In addition, a multiple regression was conducted where both the correlated parent reported and child reported family environment variables previously mentioned were entered with child reported OCD. Results showed that when all of these variables were entered together, no variables significantly predicted child reported OCD ($p > .05$).

Conversely, when the multiple regression for both correlated parent reported and child reported family environment variables with parent reported OCD was conducted, increased child reported no enmeshment was found to predict decreased parent reported OCD ($R^2 = .29$, $\beta = .32$, $p < .03$). That is, as maladaptive levels of enmeshment were approached so were higher levels of OCD.

Depression

Again, multiple standard regressions were conducted using significantly correlated variables.

As seen in Table 11, parent reported family environment and parent reported depression were positively correlated to the family environment variables psychological control, no conflict, corporal punishment, poor supervision, and negatively correlated to family idealisation, cohesion, family sociability, lack of positive reinforcement, and no parental involvement. The multiple regression found none of these variables significantly predicted parent reported depression ($p > .05$).

It was found that child reported family environment correlated with child reported depression, as shown in Table 12, on the following family environment variables: no cohesion, family sociability, lack of mother's involvement, corporal punishment, poor supervision, and inconsistent discipline were positively correlated, while no conflict and no enmeshment negatively correlated with child reported depression. The multiple regression found an overall R^2 of .56 and that cohesion ($\beta = .29$, $p < .01$), no enmeshment ($\beta = -.29$, $p < .02$), and lack of mother's involvement ($\beta = .27$, $p < .01$), predicted child reported depression.

As seen in Tables 11 and 14, the parent and child reported family environment variables correlated with parent reported depression on the following variables of family environment: parent reported psychological control, family idealisation, family sociability, no conflict, cohesion, corporal punishment, poor supervision, lack of positive reinforcement, lack of parental involvement, and child reported corporal punishment and other punishment practices (the positive and negative aspects of the correlations are as previously mentioned). The multiple regression however, found none of these family environment variables significantly predicted parent reported child depression ($p > .05$).

As seen in Tables 12 and 13, the correlations between parent and child reported family environment, and child reported depression were the following variables: child reported cohesion, conflict, sociability, no enmeshment, lack of mother's involvement, poor supervision, inconsistent discipline, corporal punishment; and parent reported poor supervision, corporal punishment, other punishment practices and no disengagement. Unlike the previous multiple regression, this regression was significant ($R^2 = .68, p < .05$) and that child reported cohesion ($\beta = .28, p < .01$), no enmeshment ($\beta = -.24, p < .04$), lack of mother's involvement ($\beta = .35, p < .00$), poor supervision ($\beta = .22, p < .04$), inconsistent discipline ($\beta = .21, p < .04$); and parent reported other punishment practices ($\beta = .33, p < .004$) significantly predicted child reported depression.

To summarise, increased parent reported family no external locus of control was found to predict increased parent reported child anxiety. In terms of OCD, when both the parent and child reported correlated family environment variables were entered into the regression on parent reported child OCD, increased child reported no enmeshment was the only significant predictor to decreased OCD. So, increased enmeshment predicted¹ increased OCD. For child reported depression, increased child reported cohesion and lack of mother's involvement in the child's life predicted increased depression, while increased no enmeshment predicted decreased depression. In addition, when parent and child reported family environment variables were entered together into the regression with child reported depression, increased child reported cohesion, lack of mother's

involvement, poor supervision, inconsistent discipline and parent reported other punishment practices predicted increased child reported depression, while increased no enmeshment again predicted decreased depression.

In conclusion then, anxiety and depression are not differentially predicted by enmeshment, with less accepting and less granting of psychological autonomy on the part of parents in comparison with OCD, so this part of the hypothesis was not supported. Indeed, increased no enmeshment predicted decreases in both OCD and depression, hence this portion of the hypothesis was also not supported. In addition, conflict, democratic family style and psychological control were not predictors of depression therefore this part of the hypothesis was also unsupported. Overall however, it can be said that anxiety differs from OCD and depression in terms of the family environment variable no external locus of control, and depression differs from OCD on the family environment variables of lack of mother's involvement in the child's life, cohesion, poor supervision, inconsistent discipline and punishment practices. Therefore, while specific aspects were not supported, the general thread of hypothesis two was supported (i.e., different family environment variables as predictors).

Table 11. *Pearson correlations for parent reported total Anxiety, Depression and OCD scores according to parent reported family environment subscales.*

Subscale	Anxiety	Depression	OCD
Cohesion	-.046	-.303*	-.159
Expression	.140	.004	.236*
No Conflict	-.028	.343**	.161
Religious Emphasis	-.044	-.147	-.027
Organisation	-.144	-.006	-.140
Family Sociability	-.073	-.251*	-.156
No External Locus of Control	.275*	.099	.268*
Family Idealisation	-.070	-.290*	-.161
No Disengagement	.067	.159	.179
Democratic Family Style	.119	.130	.101
Laissez-faire	-.024	.112	.146
Authoritarian	-.092	-.075	-.092
No Enmeshment	-.008	.076	.121
Psychological Control	.115	.346**	.312**
Acceptance	.085	.049	.097
Firm Control	.131	.202	.126
Lack of Parental Involvement	-.191	-.422**	-.248*
Lack of Positive Reinforcement	-.217	-.383**	-.284*
Poor Supervision	.154	.268*	.237
Inconsistent Discipline	.016	.147	.130
Corporal Punishment	-.017	.273*	.072
Other Punishment	-.062	.120	-.026

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 12. Pearson correlations for child reported total Anxiety, Depression and OCD scores according to child reported family environment subscales.

Subscale	Anxiety	Depression	OCD
Cohesion	.035	.416**	.165
Expression	-.211	.164	.001
No Conflict	-.321*	-.403**	-.218
Religious Emphasis	-.126	-.129	-.115
Organisation	-.174	-.147	-.158
Family Sociability	.111	.290*	.187
No External Locus of Control	-.310*	-.050	-.215
Family Idealisation	.037	.022	.087
No Disengagement	-.273*	-.072	-.253
Democratic Family Style	-.131	.030	-.076
Laissez-faire	-.367**	.013	-.252
Authoritarian	-.216	-.003	-.166
No Enmeshment	-.251	-.545**	-.330*
Lack of Mother's Involvement	.258*	.339**	.269
Lack of Father's Involvement	.248	.234	.204
Lack of Positive Reinforcement	.070	.233	.078
Poor Supervision	.110	.345**	.192
Inconsistent Discipline	-.030	.332**	.123
Corporal Punishment	.153	.401**	.296*
Other Punishment	-.090	.090	.088

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 13. *Pearson correlations for child reported total Anxiety, Depression and OCD scores according to parent reported family environment subscales.*

Subscale	Anxiety	Depression	OCD
Cohesion	.014	-.232	.041
Expression	-.122	.119	.008
No Conflict	.177	.092	.162
Religious Emphasis	-.180	.109	-.176
Organisation	-.159	.080	-.035
Family Sociability	-.015	-.029	-.170
No External Locus of Control	-.005	.088	.218
Family Idealisation	-.077	-.060	.028
No Disengagement	-.074	.369**	.134
Democratic Family Style	.099	.098	.121
Laissez-faire	-.161	.079	.012
Authoritarian	-.094	-.100	-.241
No Enmeshment	-.173	.101	.017
Psychological Control	.087	.199	.055
Acceptance	.121	.050	-.148
Firm Control	-.044	.173	-.264
Lack of Parental Involvement	-.055	-.236	-.031
Lack of Positive Reinforcement	.011	-.217	-.024
Poor Supervision	-.176	.345**	-.037
Inconsistent Discipline	-.084	.128	.040
Corporal Punishment	.026	.388**	.024
Other Punishment	.093	.304*	-.004

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 14. *Pearson correlations for parent reported total Anxiety, Depression and OCD scores according to child reported family environment subscales.*

Subscale	Anxiety	Depression	OCD
Cohesion	-.128	-.009	-.031
Expression	-.001	.155	.090
No Conflict	.066	-.194	.059
Religious Emphasis	.012	-.044	.111
Organisation	.070	-.020	.074
Family Sociability	.017	.114	.110
No External Locus of Control	.102	.033	.159
Family Idealisation	-.045	.040	-.078
No Disengagement	.089	.045	.153
Democratic Family Style	.069	.101	-.010
Laissez-faire	.107	-.078	.004
Authoritarian	.041	-.013	.104
No Enmeshment	.145	-.126	.123
Lack of Mother's Involvement	-.029	.156	.066
Lack of Father's Involvement	-.062	.059	.019
Lack of Positive Reinforcement	.113	.110	.173
Poor Supervision	.097	.137	.180
Inconsistent Discipline	-.011	.136	.020
Corporal Punishment	-.001	.254*	.175
Other Punishment	.071	.272*	.231

* *Correlation is significant at the 0.05 level (2-tailed).]*

Hypothesis Three:

The family environment is a moderator in the relationship between child's anxiety and depression.

Table 15 shows the results of the hierarchical regression computed for parent reported family environment as a moderator between parent reported anxiety and parent reported depression. Step one found anxiety to be a significant predictor of depression, as it also did in step two. The family environment variable no conflict also significantly predicted depression in step two. At step three however, only anxiety still predicted depression, with the interaction products revealing no significant interactions. Therefore, the first hierarchical regression did not support the hypothesis.

The second hierarchical regression is shown in Table 16, and concerns child reported family environment as a moderator between child reported anxiety and child reported depression. Step one has anxiety as nonsignificant, while step two shows lack of mother's involvement in the child's life and inconsistent discipline to be significant predictors of child reported depression. Step three continues to hold lack of mother's involvement and inconsistent discipline as predictors, also picking up no cohesion as a predictor of child reported depression. Of the interaction effects, the family environment variable no disengagement moderated the predictive relationship between anxiety and child reported depression. This result supported hypothesis three.

The next, and third, hierarchical regression computed assessed child reported family environment as a moderator between child reported anxiety and parent reported child depression, as shown in Table 17. Step one revealed no significant predictors of parent reported depression, while step two produced the child reported family environment variable of other discipline (or other punishment) as a significant predictor of parent reported depression. Step three is interesting in that the interaction variable of anxiety, as moderated by no disengagement, significantly predicted parent reported depression (as was the case for child reported depression). This then, also provided support for hypothesis three.

The fourth hierarchical regression was conducted upon child reported family environment as a moderator between parent reported child anxiety and parent reported child depression, as shown in Table 18. Step one was non-significant, while step two again (as in hierarchical regression 3) found the child reported family environment variable other discipline as a predictor of parent reported depression. Other discipline remained significant at step two, but no interaction variables were significant. Hypothesis three was not supported by this regression.

Table 19 shows the fifth hierarchical regression performed for hypothesis three. This regression concerns child reported family environment as a moderator between parent reported child anxiety and parent reported child depression. Step one shows anxiety significantly predicted depression, as it also did in step two and step three. No

interaction variables were significant, however, so hypothesis three was not supported by this regression.

The sixth hierarchical regression is shown in Table 20, and regards parent reported family environment as a moderator between child reported anxiety and parent reported child depression. Step one and step two of the hierarchy had no significant variables, and only anxiety was a significant predictor in step three, again meaning that hypothesis three was not supported by this hierarchical regression.

Child reported family environment as a moderator between parent reported anxiety and child reported depression is the focus of the seventh hierarchical regression displayed in Table 21. In step one and two anxiety was not significantly predictive of depression. However, child reported no enmeshment, lack of mother's involvement, and inconsistent discipline were significantly predictive of depression in step two. In step three, cohesion became a significant predictor, and no enmeshment, lack of mother's involvement and inconsistent discipline remained as significant predictors. In addition, the interaction variable of family sociability and depression was significant. This was supportive of hypothesis three.

Table 22 shows the final hierarchical regression conducted on parent reported family environment as a moderator between child reported anxiety and child reported depression. Step one shows anxiety was not a significant predictor of depression, but in step two and three it was. Step two also shows parent reported no disengagement and other discipline as significant predictors of child reported depression. Step three however, shows no other significant predictors other than anxiety. Thus, this final regression does not support hypothesis three.

In summary, the second hierarchical regression found that child reported no disengagement moderated the predictive relationship between child reported anxiety and child reported depression. The third hierarchical regression found that child reported no disengagement also moderated the predictive relationship between child reported anxiety and parent reported depression. In addition, the seventh hierarchical

regression found that child reported family sociability moderated the predictive relationship between parent reported anxiety and child reported depression. These three hierarchical regressions supported hypothesis three.

Table 15. Hierarchical Multiple Regression 1: Parent Reported Family Environment as Moderator Between Parent Reported Anxiety and Parent Reported Depression

Regression Step	Variables	Beta	t	Significance
1	Anxiety	.677	7.008	.000***
2	Anxiety	.632	6.375	.000***
	No Conflict	.291	2.050	.046*
	No External Locus of Control	.005	.041	.968
	No Disengagement	-.018	-.151	.881
	Lack of Parental Involvement	-.144	-.796	.430
	Cohesion	-.199	-1.367	.178
	Family Sociability	.103	.666	.509
	Family Idealisation	.007	.053	.958
	Psychological Control	.155	1.433	.159
	Lack of Positive Reinforcement	.063	.396	.694
	Corporal Punishment	-.187	-1.420	.162
	Other Discipline	.133	1.145	.258
3	Anxiety	.663	4.237	.000***
	No Conflict	.361	1.934	.061
	No External Locus of Control	-.065	-.357	.724
	No Disengagement	.008	.054	.958
	Lack of Parental Involvement	-.143	-.525	.603
	Cohesion	-.085	-.388	.700
	Family Sociability	.026	.133	.895
	Family Idealisation	.105	.601	.552
	Psychological Control	-.042	-.216	.830
	Lack of Positive Reinforcement	-.082	-.378	.708
	Corporal Punishment	-.064	-.371	.713
	Other Discipline	.101	.677	.503
	Anxiety & No Conflict	.127	.399	.693
	Anxiety & No External Locus of Control	.110	.361	.720
	Anxiety & No Disengagement	.069	.412	.683
	Anxiety & Idealisation	-.289	-1.139	.263
	Anxiety & Lack of Parental Involvement	.110	.400	.691
	Anxiety & Cohesion	.336	1.189	.242
	Anxiety & Sociability	-.063	-.301	.765
	Anxiety & Psychological Control	-.215	-.974	.337
	Anxiety & Poor Supervision	.185	.980	.334
	Anxiety & Lack of Positive Reinforcement	-.240	-1.062	.296
	Anxiety & Other Discipline	-.159	-.780	.441
	Anxiety & Corporal Punishment	.103	.499	.621

Table 16. *Hierarchical Multiple Regression 2: Child Reported Family Environment as Moderator Between Child Reported Anxiety and Child Reported Depression*

Regression Step	Variables	Beta	<i>t</i>	Significance
1	Anxiety	.249	1.746	.087
2	Anxiety	.152	1.142	.261
	No Conflict	-.039	-.279	.782
	No External locus of control	-.054	-.404	.689
	No Disengagement	.104	.764	.450
	Laissez-faire style	.191	1.466	.156
	Cohesion	.184	1.570	.125
	Family sociability	.164	1.405	.169
	No Enmeshment	-.316	-2.007	.053
	Lack of Mother's involvement	.316	2.475	.018*
	Poor supervision	.084	.632	.532
	Inconsistent discipline	.299	2.205	.034*
	Corporal punishment	-.075	-.516	.609
3	Anxiety	.207	1.191	.245
	No Conflict	.003	.019	.985
	No External Locus of Control	.113	.746	.463
	No Disengagement	.081	.461	.649
	Laissez-Faire Style	.010	.074	.942
	Cohesion	.255	2.073	.049*
	Family Sociability	.211	1.505	.145
	No Enmeshment	-.329	-1.846	.077
	Lack of Mother's Involvement	.429	2.807	.010**
	Poor Supervision	.103	.631	.534
	Inconsistent Discipline	.323	2.302	.030*
	Corporal Punishment	-.167	-1.022	.317
	Anxiety & No Conflict	.057	.218	.830
	Anxiety & No External Locus of Control	.110	.610	.548
	Anxiety & No Disengagement	.432	2.193	.038*
	Anxiety & Laissez-faire	-.208	-1.030	.313
	Anxiety & Lack of Mother's Involvement	.056	.307	.761
	Anxiety & Cohesion	-.198	-.944	.354
	Anxiety & Sociability	-.219	-.893	.381
	Anxiety & No Enmeshment	-.548	-1.855	.076
	Anxiety & Poor Supervision	.119	.577	.570
	Anxiety & Inconsistent Discipline	.380	1.921	.067
	Anxiety & Corporal Punishment	-.156	-.815	.423

Table 17 *Hierarchical Multiple Regression 3: Child Reported Family Environment as Moderator Between Child Reported Anxiety and Parent Reported Depression*

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.172	1.236	.222
2	Anxiety	.174	1.104	.276
	No Conflict	-.082	-.520	.606
	No External Locus of Control	.158	1.020	.314
	No Disengagement	.146	.991	.327
	Laissez-Faire Style	-.055	-.361	.720
	Lack of Mother's Involvement	.227	1.591	.119
	Corporal Punishment	.071	.482	.632
	Other Discipline	.317	2.076	.044*
3	Anxiety	.256	1.281	.208
	No Conflict	.162	.805	.426
	No External Locus of Control	.089	.471	.641
	No Disengagement	.059	.361	.720
	Laissez-Faire Style	-.054	-.314	.755
	Lack of Mother's Involvement	.217	1.517	.138
	Corporal Punishment	.172	.953	.347
	Other Discipline	.255	1.474	.149
	Anxiety & Corporal Punishment	-.066	-.363	.719
	Anxiety & Other Discipline	.074	.457	.651
	Anxiety and No Conflict	-.364	-1.510	.140
	Anxiety & No External Locus of Control	.299	1.397	.171
	Anxiety & No Disengagement	.453	2.567	.015*
	Anxiety & Laissez-Faire	.051	.221	.827
	Anxiety & Family Style			
	Anxiety & Lack of Mother's Involvement	-.016	-.087	.931

Table 18. Hierarchical Multiple Regression 4: Child Reported Family Environment as Moderator Between Parent Reported Anxiety and Parent Reported Depression

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.027	.198	.843
2	Anxiety	.054	.408	.685
	Poor Supervision	.129	.897	.374
	Corporal Punishment	.137	.948	.347
	Other Discipline	.267	2.024	.048*
	No Disengagement	.273	1.820	.075
	No External Locus of Control	-.062	-.412	.682
3	Anxiety	.201	1.189	.241
	Poor Supervision	.136	.860	.394
	Corporal Punishment	.093	.547	.587
	Other Discipline	.359	2.376	.022*
	No Disengagement	.234	1.394	.170
	No External Locus of Control	.076	.417	.679
	Anxiety & Poor Supervision	-.096	-.606	.547
	Anxiety & Corporal Punishment	.036	.196	.846
	Anxiety & Other Discipline	-.054	-.361	.720
	Anxiety & No Disengagement	.012	.084	.933
	Anxiety & No External Locus of Control	-.265	-1.329	.190

Table 19. Hierarchical Multiple Regression 5: Parent Reported Anxiety as Moderator Between Child Reported Family Environment and Parent Reported Depression

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.689	7.419	.000***
2	Anxiety	.679	7.518	.000***
	Corporal Punishment	.141	1.143	.143
	Other Discipline	.126	1.326	.190
3	Anxiety	.712	6.441	.000***
	Corporal Punishment	.141	1.455	.151
	Other Discipline	.129	1.336	.187
	Anxiety & Corporal Punishment	.016	.145	.885
	Anxiety & Other Discipline	-.072	-.592	.556

Table 20. *Hierarchical Multiple Regression 6: Parent Reported Family Environment as Moderator Between Child Reported Anxiety and Parent Reported Depression*

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.159	1.174	.245
2	Anxiety	.121	.912	.367
	Lack of Involvement	.037	.118	.907
	Lack of Positive Reinforcement	-.149	-.532	.597
	Poor Supervision	.136	.848	.401
	Corporal Punishment	-.124	-.732	.468
	Cohesion	-.156	-.880	.384
	No Conflict	.229	1.274	.209
	Family Sociability	-.019	-.105	.917
	Family Idealisation	-.080	-.484	.631
	Psychological Control	.219	1.552	.128
3	Anxiety	.446	2.065	.046*
	Lack of Parental Involvement	-.212	-.594	.556
	Lack of Positive Reinforcement	-.028	-.097	.924
	Poor Supervision	.272	1.406	.169
	Corporal Punishment	-.193	-1.060	.296
	Cohesion	-.192	-.942	.353
	No Conflict	.065	.336	.739
	Family Sociability	.064	.321	.750
	Family Idealisation	-.064	-.354	.726
	Psychological Control	.247	1.342	.188
	Anxiety & Lack Parental Involvement	-.209	-.317	.753
	Anxiety & Lack of Positive Reinforcement	.006	.013	.990
	Anxiety & Poor Supervision	.386	1.611	.116
	Anxiety & Corporal Punishment	-.039	-.169	.867
	Anxiety & Cohesion	.191	.502	.619
	Anxiety & No Conflict	-.224	-.758	.454
	Anxiety & Family Sociability	-.068	-.322	.749
	Anxiety & Family Idealisation	-.412	-1.397	.171
	Anxiety & Psychological Control	.228	1.129	.267

Table 21. Hierarchical Multiple Regression 7: Child Reported Family Environment as Moderator Between Parent Reported Anxiety and Child Reported Depression

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.131	.943	.350
2	Anxiety	.139	1.355	.183
	Cohesion	.170	1.592	.119
	No Conflict	-.009	-.077	.939
	Sociability	.153	1.403	.168
	No Enmeshment	-.409	-3.117	.003**
	Lack of Mother's Involvement	.320	2.860	.007**
	Poor Supervision	.046	.396	.694
	Inconsistent Discipline	.300	2.488	.017*
	Corporal Punishment	-.095	-.795	.431
3	Anxiety	.338	1.491	.145
	Cohesion	.290	2.434	.020*
	No Conflict	-.083	-.590	.559
	Sociability	.178	1.584	.122
	No Enmeshment	-.319	-2.366	.024*
	Lack of Mother's Involvement	.272	2.316	.027*
	Poor Supervision	.095	.785	.438
	Inconsistent Discipline	.273	2.190	.035*
	Corporal Punishment	-.028	-.216	.830
	Anxiety & Corporal Punishment	-.205	-1.004	.322
	Anxiety & Cohesion	.137	.920	.364
	Anxiety & No Conflict	-.020	-.107	.915
	Anxiety & Family Sociability	.514	2.214	.033*
	Anxiety & No Enmeshment	.078	.445	.659
	Anxiety & Lack of Mother's Involvement	-.183	-1.055	.299
	Anxiety & Poor Supervision	.022	.156	.877
	Anxiety & Inconsistent Discipline	-.296	-1.941	.060

Table 22. Hierarchical Multiple Regression 8: Parent Reported Family Environment as Moderator Between Child Reported Anxiety and Child Reported Depression

Regression Step	Variables	Beta	t-value	Significance
1	Anxiety	.198	1.458	.151
2	Anxiety	.256	2.124	.039*
	Poor Supervision	.156	1.059	.295
	No Disengagement	.294	2.166	.035*
	Corporal Punishment	.164	1.190	.240
	Other Discipline	.255	2.031	.048*
3	Anxiety	.335	2.510	.016*
	Poor Supervision	.116	.686	.497
	No Disengagement	.259	1.843	.072
	Corporal Punishment	.138	.906	.370
	Other Discipline	.278	1.992	.053
	Anxiety & Poor Supervision	.031	.162	.872
	Anxiety & Corporal Punishment	.087	.544	.589
	Anxiety & Other Discipline	.197	1.190	.240
	Anxiety & No Disengagement	.138	.806	.424

Hypothesis Four:

OCD problems are associated with internalising and externalising problems, while anxiety and depression are more highly associated with internalising problems.

Internalising

Pearson correlations revealed neither child reported anxiety nor OCD were significantly correlated with parent reported internalising problems. The parent reports of anxiety and OCD however, showed positive correlations with internalising problems ($r = .92, p < .01$ and $r = .84, p < .01$ respectively). One multiple standard regression was conducted here, parents report of child anxiety significantly predicted internalising problems ($R^2 = .91, \beta = .64, p < .00$). The multiple regression found that parent reported child OCD did not significantly predict internalising problems.

Externalising

Child reports of anxiety were not found to correlate significantly with parent reported externalising problems, though child reported OCD was found to positively correlate with externalising problems ($r = .39, p < .01$). In addition, parent reports of child anxiety and OCD showed a positive correlation with externalising problems ($r = .24, p < .05$); ($r = .49, p < .01$). The multiple regression found overall significance ($R^2 = .58, p < .05$), and that parent reported anxiety ($\beta = -.74, p < .00$), parent reported OCD ($\beta = .55, p < .003$), and child reported OCD ($\beta = .28, p < .007$) predicted externalising problems.

In conclusion, parent reports of anxiety predicted both internalising and externalising problems, while parent and child reports of OCD and parent report of anxiety predicted externalising problems. It was expected that OCD would also predict internalising and that anxiety would not predict externalising, so hypothesis four was not supported.

Hypotheses Five to Seven:

Not possible to test (see p.64 in Method section).

Hypothesis Eight:

Obsessive-compulsive disorder are associated with the use of internalising and externalising coping strategies, while anxiety and depression are associated with the use of internalising coping strategies.

Obsessive-Compulsive Disorder

Pearsons correlations showed the child reported coping strategies social withdrawal ($r = .32, p < .05$) and blame ($r = .44, p < .01$) were positively correlated with child reported OCD, while only the child reported coping strategy of blame ($r = .35, p < .01$) was positively correlated with parent reported child OCD. Two multiple regression were thus computed, one for child reported OCD and another for parent reported child OCD respectively. The first regression found the coping strategy blame significantly predicted child reported OCD ($R^2 = .24, \beta = .38, p < .006$). The second multiple regression also found blame predicted parent reported OCD ($R^2 = .12, \beta = .35, p < .004$).

Anxiety

Three of the four possible child reported coping strategies were positively correlated with child reported anxiety: social withdrawal ($r = .42, p < .01$), blame ($r = .31, p < .05$), and wishful thinking ($r = .30, p < .05$). Conversely, no coping strategies were significantly correlated with parent reported child anxiety. The multiple regression conducted for coping strategies and child reported anxiety found overall significance ($R^2 = .29, p < .05$) and that social withdrawal ($\beta = .36, p < .004$), and wishful thinking ($\beta = .25, p < .04$) significantly predicted child reported anxiety.

Depression

One coping strategy was found to positively correlate with child reported depression, blame ($r = .40, p < .01$). Two coping strategies also significantly correlated, in a positive direction, with parent reported child depression: social withdrawal ($r = .26, p < .05$) and blame ($r = .34, p < .01$). Two multiple regressions found that blame significantly predicted both child and parent reported child depression ($R^2 = .16, \beta = .40, p < .001$ and $R^2 = .15, \beta = .29, p < .02$, respectively).

In summary, blame as a coping strategy predicted both parent and child reports of OCD and depression, while social withdrawal and wishful thinking predicted child reported anxiety. Thus, the coping strategy that predicted OCD was not different from the coping strategy that predicted depression, but was different from the coping strategies that predicted anxiety. Thus, hypothesis eight was partially supported.

Hypothesis Nine:

The coping strategies children use is related to their family environment.

Positive Coping

Pearson's correlation coefficients were computed for positive coping and child and then parent reported family environment. Four child reported family environment variables correlated negatively with positive coping: organisation ($r = -.27, p < .05$), lack of mother's involvement ($r = -.42, p < .01$), lack of father's involvement ($r = -.38, p < .01$), and lack of positive reinforcement ($r = -.26, p < .05$), and no variables correlated positively with positive coping. Conversely, only the no disengagement ($r = .25, p < .05$) and laissez-faire family style ($r = .34, p < .01$) parent reported family environment variables were correlated (positively) with positive coping.

The correlated child reported family environment variables were regressed on positive coping, and overall variance was .33 ($p < .05$) and child reported organisation ($\beta = -.35, p < .005$) and child reported lack of mother's involvement ($\beta = -.33, p < .04$) were found to significantly predict the positive coping strategy. The second regression using the correlated parent reported family environment variables found laissez-faire family style to significantly predict positive coping in children ($R^2 = .13, \beta = .29, p < .04$).

Social Withdrawal

Interestingly, both parent and child reported family environment correlated with social withdrawal in children along one variable. Child reported no conflict however, correlated negatively with social withdrawal ($r = -.28, p < .05$), while parent reported

no conflict ($r = .35, p < .01$) correlated positively. The multiple regression conducted on child reported no conflict found it significantly predicted social withdrawal as a coping strategy in children ($R^2 = .08, \beta = -.28, p < .02$). The multiple regression using parent reported no conflict was also found to significantly predict social withdrawal in children ($R^2 = .12, \beta = .35, p < .004$).

Blame

The coping strategy of blame used by the children in the present study was correlated to an array of both parent reported and child reported family environment variables. Of the child reported family environment variables, no familial conflict ($r = -.25, p < .05$) was the only variable to correlate negatively to blame, while expressiveness ($r = .29, p < .05$), poor supervision ($r = .35, p < .01$), use of corporal punishment ($r = .30, p < .05$), and other forms of punishment ($r = .35, p < .01$) all correlated positively. Parent reported family environment variables significantly correlated with blame included negatively correlated lack of parental involvement in the child's life ($r = -.31, p < .05$) and family sociability ($r = -.29, p < .05$). In addition, the use of psychological control ($r = .25, p < .05$) and the use of other forms of punishment ($r = .29, p < .05$) were both positively correlated with the child's use of blame as a coping strategy.

Results of the multiple regression using parent reports of the family environment found other forms of punishment predicted child's use of blame as a coping strategy ($R^2 = .22, \beta = .28, p < .03$). Conversely, according to child reports on the family environment, three different variables were found to predict blame (overall $R^2 = .28, p < .05$): no conflict ($\beta = -.26, p < .05$), expressiveness ($\beta = .26, p < .05$), and poor supervision ($\beta = .29, p < .04$).

Wishful Thinking

Only one child reported family environment variable significantly correlated with wishful thinking as a coping strategy. Child reported family sociability was negatively correlated with wishful thinking ($r = -.29, p < .05$). Parent reported family environment and wishful thinking had many significantly correlated variables. Lack of parental

involvement ($r = .33, p < .01$) and lack of positive reinforcement ($r = .34, p < .01$) were both positively correlated to wishful thinking according to Pearson's correlations. Parent reported poor supervision ($r = -.35, p < .01$), use of corporal punishment ($r = -.30, p < .05$), no familial conflict ($r = -.37, p < .01$), family organisation ($r = -.37, p < .01$), and no disengagement ($r = -.27, p < .05$) were negatively correlated with the child's use of wishful thinking as a coping strategy.

The multiple regression using the parent reports of the family environment found family organisation was the only variable that could significantly predict the child's use of wishful thinking as a coping strategy ($R^2 = .35, \beta = -.31, p < .02$). The second multiple regression, which was conducted using the children's reports of the family environment, found family sociability able to significantly predict the use of the wishful thinking coping strategy ($R^2 = .08, \beta = -.29, p < .02$).

In conclusion, child reported family organisation and lack of mother's involvement in the child's life and parent reported laissez-faire family style predicted the use of positive coping as a coping strategy. Also, parent and child reported no familial conflict predicted the use of social withdrawal. The child's reports of no conflict, family expressiveness and poor supervision, along with parent reports of other punishments predicted the use of blame as a coping strategy in children. In addition, both parent and child reported family organisation predicted the use of wishful thinking. There is no overlap between the family environment variables shown to predict the four different coping strategies, thus hypothesis nine is supported.

Hypothesis Ten:

The quantity and severity of Significant Life Events are associated with higher levels of Anxiety and OCD.

Pearson's correlations revealed child reports of both anxiety and OCD were not significantly correlated with either quantity or severity of significant life events experienced by the family (as reported by the parents). Parent reports of anxiety and OCD however, were positively correlated to both quantity

($r = .35, p < .01$ and $r = .33, p < .01$, respectively) and severity ($r = .45, p < .01$ and $r = .35, p < .01$, respectively).

In conclusion, parent reported child anxiety and OCD were associated with both the quantity and severity of significant life events experienced by the family. However, as child reports were found not to be related, hypothesis ten is only partially supported.

Hypothesis Eleven:

Children's coping strategies moderate the relationship between the quantity and severity of significant life events and Anxiety.

Multiple regressions were performed, according to the methodology previously mentioned by Baron and Kenny (1986), to assess coping strategies as moderators between the quantity of significant life events and anxiety, and the severity of significant life events and anxiety. Pearson's correlation coefficients were computed to assess the correlational nature between the differing coping strategies and parent and child reported anxiety. The results, as previously mentioned in the discussion of hypothesis eight, showed that parent reported anxiety was not correlated with any of the coping strategies assessed in this study. Thus, parent reported anxiety was not used in the following regression analyses. Alternatively, child reported anxiety was significantly correlated with three of the four coping strategies assessed in the present study. To recapitulate, social withdrawal, blame, and wishful thinking were significantly correlated with child reported anxiety. Therefore, these three coping strategies alone were entered into the hierarchical linear multiple regressions.

The first hierarchical regression regarding child reported coping strategies as a moderator between quantity of significant life events and child reported anxiety, found quantity of significant life events did not significantly predict child reported anxiety in the first step of the regression, as seen in Table 23. The second step found social withdrawal to significantly predict child reported anxiety, while in the third step social withdrawal and wishful thinking were predictors. No interaction variables were

significant predictors, however, thus hypothesis eleven was not supported by this regression.

The second hierarchical regression is shown in Table 24, and concerns child reported coping strategies as a moderator between severity of significant life events and parent reported anxiety. Step one again shows no significant predictors, while step two has both social withdrawal and wishful thinking as significant predictors of parent reported child anxiety. These two coping strategies were again significant at step three, but as no interaction variables were significant, hypothesis eleven is not supported in the present study.

Table 23. Hierarchical Multiple Regression 1: Quantity of Significant Life Events as a Moderator Between Child Reported Coping Strategies and Child Reported Anxiety

Regression Step	Variables	Beta	t-value	Significance
1	Quantity Signif. Events	.247	1.834	.072
2	Quantity Signif. Events	.074	.517	.607
	Social Withdrawal	.354	2.777	.008**
	Blame	.125	.906	.370
	Wishful Thinking	.272	2.227	.031
3	Quantity Signif. Events	-.027	-.158	.875
	Social Withdrawal	.345	2.631	.012*
	Blame	.151	.977	.334
	Wishful Thinking	.258	2.012	.050*
	Quantity Signif. Events & Social Withdrawal	.083	.516	.608
	Quantity Signif. Events & Blame	-.033	-.180	.858
	Quantity Signif. Events & Wishful Thinking	-.129	-.948	.348

Table 24. Hierarchical Multiple Regression 2: Severity of Significant Life Events as a Moderator Between Child Reported Coping Strategies and Parent Reported Anxiety

Regression Step	Variables	Beta	t-value	Significance
1	Severity Signif. Events	.238	1.770	.083
2	Severity Signif. Events	.059	.425	.673
	Social Withdrawal	.353	2.719	.009**
	Blame	.138	1.045	.301
	Wishful Thinking	.271	2.214	.032*
3	Severity Signif. Events	-.037	-.236	.814
	Social Withdrawal	.332	2.516	.016*
	Blame	.121	.809	.423
	Wishful Thinking	.265	2.125	.039*
	Severity Signif. Events & Social Withdrawal	.083	.573	.570
	Severity Signif. Events & Blame	.072	.480	.634
	Severity Signif. Events & Wishful Thinking	-.122	-.986	.329

Chapter 9

DISCUSSION

Summary of Major Findings

Taken together, the findings of the current study suggest that the family environment was related to internalising and externalising problems in children, including anxiety, depression and OCD. Specific internalising problems were also found to be related to the family environment, namely anxiety, depression and OCD. In addition, specific factors within the family environment were found to moderate the relationship between anxiety and depression (i.e., disengagement and family sociability). The family environment was also found to be related to children's coping strategies, and that these coping strategies were in turn related to the specific emotional disturbances experienced by the child (i.e., anxiety, depression and OCD). The quantity and severity of significant life events experienced by the family was also found to be related to anxiety and OCD. These major findings are to be further discussed and integrated with the literature. For now, however, it is important to note that these findings have implications to children and families as well as for future research.

It was found that parent reported internalising and externalising problems in children could be predicted by specific family environment variables. The family environment variables that predicted internalising problems were different from those that predicted externalising problems, suggesting a relationship exists between specific facets of the family environment and the expressions of either internalising or externalising syndromes in the child. The variable that predicted internalising problems was family based external locus of control. The family factors that predicted externalising problems were: family sociability, lack of father's involvement in the child's life, parental use of punishment other than corporal punishment. Previous research in the area has similarly found that internalising and externalising problems differ in terms of the family environment (Barber et al., 1994; Minuchin et al., 1978; Rubin & Mills, 1991; Smets & Hartup, 1988).

It was also generally found that different family environment variables could significantly predicted self-reported generalised anxiety, OCD and depression, although there was some overlap between predictors of anxiety and OCD. The variable that predicted anxiety was, again, family external locus of control. The family factor that predicted OCD was enmeshment. Finally, those factors that predicted depression were: lack of mother's involvement in the child's life, enmeshment, cohesion, poor supervision, inconsistent discipline, and parental use of punishment practices other than corporal punishment. Other research in this area has not previously compared the family environments in terms of anxiety, depression and OCD. However, parental overcontrol has generally been associated with anxiety whereas rejection has more often been associated with depression (e.g., Siqueland et al., 1996).

Another important finding regarding the relationships between anxiety, family environment and depression was that two family environment variables moderated the predictive relationship between anxiety and depression. These factors were disengagement and family sociability. While previous research in the area has confirmed a relationship between family environment and depression (Stark et al., 1990), and anxiety as a prospective predictor of depression (Cole et al., 1998). This is the first research that has confirmed such a moderating relationship. In terms of implications, given that parental overcontrol has been found to predict anxiety in children (e.g., Siqueland et al., 1996), once developed, the anxiety may lead to depression particularly in the face of a disengaged family style and poor discipline practice. Given that parental rejection has been shown to be a predictor of depression in children (e.g., Siqueland et al., 1996), the particular form of disengagement and poor discipline may have a similarly rejecting quality for the child.

Turning to the coping strategies employed by children in the present study, it was found that the coping strategy that predicted OCD (i.e., blame) was different from the coping strategy that predicted anxiety (i.e., social withdrawal, wishful thinking). Thus, mutually exclusive coping strategies were found to predict the difference between anxiety and OCD. Other research in this area has similarly found that conceptualisations of coping are disorder specific (Kendall & Chansky, 1991), though

none have thus far specifically examined anxiety and OCD. In addition, specific mutually exclusive family environment variables were found to predict each of the coping strategies utilised in the present study suggesting specific facets of the family environment may influence the coping strategies children tend to use. To date there has been no previous research done concerning such relationships. Such findings may have implications for interventions with these disorders: targeting different coping strategies, and family factors, may enhance the utility of those interventions that already have demonstrated empirical support (e.g., Kendall, Chansky, Kane, Kim, Kortlander, Ronan, Sessa, & Siqueland, 1992)

The quantity and severity of significant life events were another area under investigation in the present study. It was found that increases in quantity and severity of significant life events experienced by the family predicted increases in anxiety and OCD. Other research in this area has similarly found that significant life events are related to anxiety and depression (Jeney-Gammon et al., 1993; Laumakis al., 1998; Anonymous et al., 1998; Zangerle et al., 1997). However, while both significant life events as well as coping strategies separately predicted increases in anxiety, there was no moderating relationship found between the two (i.e., coping moderating significant life events).

Summary of Findings Related to Specific Hypotheses

Hypothesis One

Findings related to the family environment and internalising and externalising problems indicated that increased (parent reported) family based external locus of control predicted increased internalising problems in the children. Also, increased (child reported) family sociability, increased lack of involvement of the father in the child's life, and increased parental use of punishment other than corporal punishment predicted increased externalising problems. Given these findings, the hypothesis that the family environment differs for children experiencing internalising and externalising problems was supported. Conversely, other research in this area found high use of parental psychological control and enmeshment was related to internalising problems, while disengagement and high parental use of behavioural control related to externalising features (Barber et al., 1994; Minuchin et al., 1978; Rubin & Mills, 1991). The discrepancy between previous research and the present research may be explained in terms of the population under investigation. Previous research in this area used a clinical population, whereas the present study used a normal sample. Thus, in this sample, families who look outward for solutions to problems (i.e., external locus) may lead children to feeling increased uncertainty and related problems (i.e., increases in internalising problems). On the other hand, a family environment that combines increased interactions that do not involve the father, when combined with increased punishment, may portend an increase in externalising behaviours.

The variable (i.e., family external locus of control) predicting internalising problems was reported by parents, while those predicting externalising problems were reported by children. Other research in this field has, in contrast, found that adults (i.e., parents and teachers) provide the best information on externalising problems and children are the best source for internalising problems (Reynolds, 1992). This discrepancy may be due to internalising and externalising being only parent reported. Whatever the reason for the discrepancy, future research needs to be mindful of using multiple raters. Additionally, any future application of these findings need to consider the various

perceptions of different family members as crucial. Finally, longitudinal research is needed to sort out whether these relationships hold up over time.

Hypothesis Two

Findings related to the parent and child reported family environment and child anxiety, depression and OCD indicated that, consistent with the previous set of findings, increased (parent reported) family external locus of control predicted increased (parent reported) anxiety. They also indicated that increased (child reported) enmeshment predicted decreased (parent reported) OCD. In addition, increased (child reported) family cohesion and lack of mother's involvement in the child's life predicted increased depression, while increased enmeshment also predicted increased (child reported) depression. Findings also indicated, when child and parent reported family environment were viewed together, again, (child reported) family cohesion, lack of mother's involvement in the child's life, poor supervision of the child, inconsistent discipline, and (parent reported) punishment practices (other than corporal punishment) predicted increased (child reported) depression. Also, reduced (child reported) enmeshment predicted increased (child reported) depression. That is, as maladaptive levels of enmeshment were reached depression increased. Given these findings, the general hypothesis that the family environment differs for children with anxiety, depression and OCD problems was supported. The specific hypotheses that anxiety was predicted by enmeshment, less acceptance and less granting of psychological autonomy, was not supported. In addition, the specific hypothesis that depression was predicted by enmeshment, conflict, parent use of psychological control and less acceptance, was partly supported in that enmeshment predicted child depression, thus implying that as maladaptive enmeshment occurs so too does depression in children. Similarly, other research in this area has found both anxious and depressed children characterised their families as more enmeshed, but in contrast they also found them to be more conflictual and less supportive, cohesive, expressive, with a less democratic family style than those without anxiety or depression (Stark et al., 1990). Also, increases in enmeshment (Grossman et al., 1983; Rubin & Mills, 1990; Stark et al., 1990) were related to increases in child anxiety and depression, and decreases in acceptance (Siqueland et al., 1996). Additionally, research in the area has found that

increases in parental use of psychological control were related to increases in child anxiety (Siqueland et al., 1996) and depression (Arieti and Bemporad, 1980; Puig-Antich et al., 1985), and increases in democratic family style were related to decreases in child depression (Stark et al., 1990).

Of note was the fact that the present findings of significance concerning anxiety and family environment were both based on parent report. This is in contrast to other research in the area. Siqueland et al. (1996), when the parent and child perceptions of the family environment differed, found the children's perceptions of their family and parents' behaviour was corroborated by independent observers' ratings, giving credence to the children's views. This data was also consistent with Stark et al.'s (1990) impression that parents in families with children with anxiety disorders may minimise their own or their families difficulties. The findings here may relate to cultural differences in parents being more willing to express openly their views on these potentially sensitive topics.

Hypothesis Three

Findings relating to family environment as a moderator in the relationship between anxiety and depression indicated that anxiety, when moderated by increased child reported disengagement (i.e., maladaptive), predicted both child and parent reported depression. Also, parent reported anxiety, when moderated by increased child reported family sociability, predicted child reported depression. Given these findings, the hypothesis that family environment moderates the relationship between anxiety and depression was supported. Other research in this area found family environment and depression were related on three family environment factors of increased conflict, decreased time spent in recreational activity and increased enmeshment (Stark et al., 1990). In addition, Cole et al. (1998) found a temporal relationship between anxiety and depression, suggesting anxiety precedes depression. However, we now have preliminary evidence of some family-based factors that moderate this prospective relationship that need to be tested in longitudinal research similar to Cole et al. (1998). The finding relating to increased family sociability being a moderator in the relationship between anxiety and depression is contrary to expectations (i.e., it was expected that decreased sociability would relate to problems like depression). An

earlier set of findings in the current study also found increased family sociability to predict depression. This may be due to cultural differences in children using different criteria for family sociability (i.e., perceiving an increased amount of social interactions to constitute family sociability).

Hypothesis Four

Findings relating to OCD and anxiety as predictors of internalising and externalising problems indicated that increased anxiety (parent reported) predicted both internalising and externalising problems, while increased OCD (parent and child reported) predicted externalising problems. Given these findings, the hypothesis that while OCD has features in common with internalising problems, it has additional features in common with externalising problems when compared to more general forms of anxiety was not supported. That is, OCD was not found to predict internalising as well as externalising, while anxiety predicted both internalising and externalising problems. Other research in this area has found that some disorders clearly represent characteristics of both internalising and externalising syndromes (Johnson & March, 1992; Rothbaum et al., 1989). Consistent with current findings, Rapoport (1989) earlier suggested obsessive-compulsive ritualising may exhibit externalising as well as internalising behaviours despite its internalising categorisation. These findings confirm such suggestions.

Hypotheses Five, Six and Seven

The hypotheses relating to the theorised subgroups of OCD (hypothesis five), the theoretical concept of insight into OCD symptomatology (hypothesis six), and the theorised developmental model of OCD ritualisation (hypothesis seven), were unable to be tested due to the OCD sample not being large enough to facilitate adequate statistical comparisons. This is not surprising as the base rate for OCD in the general population is about .5%.

Hypothesis Eight

Findings relating to child's OCD having internalising and externalising strategies while anxiety and depression have internalising coping strategies indicated that the coping

strategy of blame/anger predicted both parent and child reports of OCD and depression. On the other hand, the coping strategies social withdrawal and wishful thinking predicted child reported anxiety. Given these findings the hypothesis that children experiencing OCD use internalising and externalising coping strategies, while anxious or depressed children use internalising strategies was partly supported. Other research in the area has found that an absence of thoughtful planning was characteristic of externalising problems and active, but misguided processing characterised internalising problems (Kendall, 1985; Kendall and Chansky, 1991). In this way, the coping strategy of blame/anger can be seen as less than thoughtful planning and more of a negative response to stressful stimuli, the coping strategy being to blame or become angry with others, that is, to externalise their problems in this way. Thus, this coping strategy fits Kendall and Chansky's (1991) criteria for an externalising coping strategy. Social withdrawal and wishful thinking on the other hand meet the criteria for internalising in that they are examples of overcontrolled behaviour as well as potentially misguided processing. The current findings then, indicate that OCD and depressive problems were associated with a more externalising coping strategy, while anxiety was associated with more internalising strategies. Given the unexpected nature of the finding relating to depression, future research needs to be done to replicate the current findings. If replicated, these findings would certainly have implications for interventions with anxious, depressed, and OCD problems in children (i.e., targeting specific coping strategies for intervention).

Hypothesis Nine

Findings relating to coping strategies and the family environment indicated that reduced child reported family organisation, reduced mother's involvement in the child's life, and a laissez-faire family style (parent reported) predicted the absence of positive coping in children. Increased familial conflict (parent and child reported) predicted the use of social withdrawal as a coping strategy. For the child's coping strategy of blame/anger, reduced conflict, increased family expressiveness, increased poor quality supervision, and increased parental use of punishment other than corporal punishment were the predictors. In addition, decreased family organisation predicted the use of wishful thinking as the child's coping strategy. Given these findings, the hypothesis

that the coping strategies children use is related to their family environment is supported. In addition, it was found that discrete factors of the family environment tended to predict the use of particular coping strategies. Currently, there is no other research in this area to compare these findings to.

Hypothesis Ten

Findings relating to the quantity and severity of significant life events as related to anxiety and OCD indicated that increased parent reported OCD and anxiety were related to increased quantity and severity of significant life events. However, this pattern of findings was not replicated using child reports. Given these findings, the hypothesis that the quantity and severity of significant life events are associated with increased anxiety and OCD was partly supported. Quantity and severity of significant life events were only related to increased anxiety and OCD based on parent, and not child, reports. Similarly, other research in this area has found that various forms of anxiety were related to significant life events (Anonymous et al., 1998; Jeney-Gammon et al., 1993; Zangerle et al., 1997), though these events were not broken down to quantity and severity.

Hypothesis Eleven

Findings relating to children's coping strategies as a moderator in the relationship between the quantity and severity of significant life events and anxiety indicated that no interaction variables between coping strategies and quantity or severity of significant life events were predictors of child's anxiety problems (i.e., no moderating relationship). Given these findings, the hypothesis that children's coping strategies moderate the relationship between significant life events and anxiety was not supported. Other research in this area has found that significant life events and anxiety were related (Anonymous et al., 1998; Jeney-Gammon et al., 1993; Zangerle et al., 1997), and that coping and internalising problems (e.g., anxiety) were related (Kendall & Chansky, 1991), but thus far no research has found coping to moderate between significant life events and anxiety.

Limitations of Present Study

The limitations of the present study include not using multiple methods of assessment were used (i.e., child, parent). That is, for the all the constructs under investigation, multiple measures of the exact same constructs were not in every instance. A notable example is that there was not a child-based measure of internalising and externalising problems. A multimethod approach provides cross-validation of information obtained from different sources, so that greater confidence can be placed in the conclusions drawn from the assessment data.

The measure that was used in order to assess the coping strategies that children use (the Kidcope) did not show adequate internal consistency reliability in the present study, but as it was the only measure for coping strategies, it was used in the analyses to address relevant hypotheses. This is a limitation in that the confidence in which it can be said that these coping strategies reliably, and thus validly, measured the actual coping strategies used by children in this study is compromised. Thus, findings relating to coping in children need to be qualified as tentative and in need of replication using more reliable instruments.

A modest amount of participants were involved in the present study, but the results may have been limited in power due to the sample size not being large enough. Also, the sample was not large enough to test the OCD specific hypotheses. That is, the total sample needed to be larger in order to increase the likelihood of specific participants meeting the criteria for membership in the OCD sample group. Also, the sample was not representative of the New Zealand population as schools the that chose to participate were generally from high socio-economic areas where New Zealand's ethnic minorities were also under-represented. Finally, the sample was not drawn from a clinical population.

Another limitation of the present study is that only one parent in each family was required to participate. As a result, more mothers than fathers participated. This may have produced different results than if more fathers participated and contributed their

perceptions. In addition, teachers were not used as a source for information about the children participating in the present study. This is a limitation because teachers have access to observing the child's behaviour in a different context than parents. Children spend a good majority of their time in school and often behave differently when in the company of peers and in a structured school environment.

Suggestions for Future Research

Replicating the hypotheses combining family features and parenting practices with a larger sample, and additionally including a clinical sample of children with anxiety, depression and OCD, may provide richer information on the family environments interplay with the varying levels of the relevant disorders. Future research might also look into using a clinic referred sample to see if the present study results are directly generalisable to a clinic population.

Another possible avenue for future research is to use a clinical sample of OCD to assess internalising and externalising features, using both child and parent reports of internalising/externalising problems. A cross-sectional clinical sample of OCD may also provide a larger OCD sample with which the OCD specific hypotheses unable to be investigated in the present study may be evaluated.

In addition, further research into the role of the family environment as a moderator of children's anxiety and depression using a larger, and possibly more representative, sample drawn from the general population may provide more significant results. Alternatively, prospective studies using both normal and clinical samples appear necessary to look at the temporal nature of this moderating relationship.

Further research investigating whether quantity and severity of significant life events differentially impact coping and emotional functioning using a larger sample and reliable measure of coping may provide potentially more reliable results.

In addition, particularly if using clinical samples, an interesting question revolves around how symptomatic versus non-symptomatic siblings perceptions differ on their shared family environment. Future research in this area might also use more fathers and teachers as sources for information in order to obtain multiple perceptions of not only the child's behaviour, but also of the family environment as a whole.

Attention is also required to look into the nature of the child and parent report differences on family environment, anxiety, depression and OCD. Future research might seek to investigate how these differences in perception of the family environment occur and along which dimensions.

Additional research is also required to replicate the coping hypotheses using a measure of children's coping that meets the minimal reliability criteria. Also, the measures used to assess parent reports of depression, OCD and anxiety were derived from the CBCL. A more comprehensive measure of parents reports of anxiety, depression and OCD in their child may provide additional information from an important source in the child's life.

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APPENDIX A

Externalising Disorders

Conduct Disorder features repetitive and persistent patterns of behaviour in which the basic rights of others, or major age-appropriate societal norms or rules are violated. These behaviours generally can be divided into four main areas: aggressive conduct that causes or threatens physical harm to other people or animals, nonaggressive conduct that causes property loss or damage, deceitfulness or theft, and serious violations of rules; three of which must have been present for at least twelve months and caused significant impairment in social, academic, or occupational functioning. There are two types of conduct disorder: Childhood-onset type (begin in childhood) and Adolescent-onset type (begin in adolescence), with both capable of mild, moderate or severe expressions. These different onset types produce different developmentally specific manifestations. The childhood-onset subtype has onset of at least one of the above criteria before the age of ten and is predominant in males. These kids frequently display aggressive behaviour toward others, have disturbed peer relations, and are more likely to have persistent Conduct Disorder through adolescence and develop Antisocial Personality Disorder in adulthood. Adolescent-onset individuals are usually less outwardly aggressive, and often have more normative peer relationships (their conduct problems are when in company of peers), and the ratio of males to females is lower than for childhood-onset type (American Psychiatric Association, 1994).

Generally, the Conduct disordered youth may show little or no empathy and little concern for the welfare or feelings of others. They are noted to interpret ambiguous situations as hostile and worthy of retaliatory aggression, which (in their eyes) is completely justified and reasonable. Often they appear to be remorseless with little tolerance for frustration, are irritable, reckless, promiscuous (with early onset of sexual activity), and may also use various illegal substances (American Psychiatric Association, 1994).

Oppositional Defiant Disorder (ODD) on the other hand, is a pervasive pattern of negativistic, hostile, defiant behaviours toward authority figures, without serious

violations of society's norms or the rights of others (American Psychiatric Association, 1994). Like Conduct Disorder, ODD is more common in boys but equals out after puberty is reached. Typically the disorder begins by age eight and does not continue past adolescence. Kaplan, Sadock and Grebb (1994) assert research has shown that though there are no distinct family patterns, almost all parents of oppositional defiant disorder children are themselves overconcerned with issues of power, control and autonomy. They also report that some families contain several obstinate children, controlling and depressed mothers, and passive-aggressive fathers. Also, in many cases the oppositional youths were found to be unwanted children. Considering that asserting one's own will and opposing that of others is imperative to normal development as a means of establishing autonomy, forming an identity and setting inner standards and controls, if power and control are issues for the parents or if they exercise authority for their own needs, a struggle can ensue that sets the stage for the development of oppositional defiant disorder (Kaplan, Sadock, & Grebb, 1994).

Adjustment Disorder usually occurs in adolescence, but also occurs in childhood and in adulthood. It is one of the most frequently occurring disorders and happens as a response to stressful life events (single or multiple). Adjustment disorder can be seen as a short-term maladaptive reaction to what the layperson may call a personal misfortune or to what a psychologist calls a psychosocial stressor. The response is considered maladaptive because social or occupational functioning is impaired, or symptoms or behaviours are beyond the normal, usual, or expected response to such a stressor (Kaplan, Sadock & Grebb, 1994).

Attention Deficit and Hyperactivity Disorder is a debilitating disorder for both the individual experiencing it, and for those who must endure the often unmanageable behaviours elicited by them. For a diagnosis of this type, an individual is expected to have been experiencing six symptoms of inattention and six symptoms of hyperactivity-impulsivity for at least six months, to a degree which can be agreed is maladaptive and inconsistent with his or her developmental level. In addition, the child or adolescent must have had some of these said symptoms before they reached seven years of age, with some impairment expected to be in two or more areas of their life; at

school and at home for example. Also, the child must show clear evidence of clinically significant impairment in their social, academic, or occupational functioning. There are three types of ADHD that can be diagnosed: those with symptoms of both inattention and hyperactivity-impulsivity as described earlier; known as combined type, those with predominantly inattentive symptoms, and those with predominantly hyperactive-impulsive symptoms (American Psychiatric Association, 1994). In summary, this disorder, like the other externalising disorders, has just as a profound effect on the people these individuals come into contact with as it does the individual him or her self. Often the parent feels responsible and guilty yet cannot manage to control their behaviour, or lessen their own frustration and fear for the future of their child. This, of course, is not to say that the internalising disorders are in any way less distressing to the parent or child. Yet, an externalising disorder is so much harder to hide or ignore, where an internalising disorder is not.

The assessment of the externalising disorders is generally done through the use of empirically tested and psychometrically sound, standardised assessment tools. There are general broad-band inventories which are useful for screening the symptoms of externalising disorders. Some of the more popular ones are the: Child Behaviour Checklist (CBCL), Revised Child Behaviour Profile, the Child Behaviour Checklist-Teacher Report Form (Achenbach & Edelbrock, 1983), and the Personality Inventory for Children-Revised Format (Wirt, Lachar, Klinedinst, Seat, & Broen, 1984). Though these general screening scales can be useful, they are not particularly good at differentiating between some of the externalising disorders, especially Conduct Disorder and ADHD. So, in order to assess more closely, one of the narrow-band scales specific to these disorders may be used. The better known measure of these is Conners Parent Rating Scale-Revised, and Conners Teacher Rating Scale-Revised (Conners, 1989). There are two parent versions available, measuring conduct, psychosomatic, and learning problems; impulsivity-hyperactivity; anxiety-passivity; and antisocial behaviour among others. The two teacher versions measure hyperactivity, conduct problems, anxiety-passivity, emotional-overindulgent behaviour, and daydreaming. Diamond and Deane (1991) however, found these scales to have a

measurement effect; results all showed a short-term improvement, then a steady downward trend.

The treatment of ADHD and Conduct Disorder is usually through a multimodal regimen of individual therapy, pharmacotherapy, behaviour modification, parent counselling, and treatment of any coexisting learning disability (especially in ADHD kids). The pharmacotherapy often includes the use of methylphenidate (Ritalin) (or another similar medication), a central nervous system stimulant which in most people reduces overactivity, distractibility, impulsiveness, explosiveness, and irritability. The side effects are minimal in comparison with other options, but still may cause the individual nausea, stomach aches, headaches and insomnia, with some youths having a rebound effect of becoming more irritable just as the stimulant wears off. The medication has also been associated with growth suppression, but these children usually make up the growth during extended periods when the drug is not taken.

Methylphenidate however, is a short-acting drug, so is generally just used during school hours to help the individual attend to tasks and sustain concentration. Behaviour therapy is utilised to set up a predictable structure of reward and punishment for the kids, and the parents are taught that permissiveness is not helpful to their child. The individual therapy is aimed at dispelling any misconceptions about being "crazy", and to help bolster self-esteem. Comparatively, the primary treatment of Oppositional Defiant Disorder is individual psychotherapy for the child (as with Adjustment Disorder), with counselling and direct training of the parents in child management skills. The emphasis is behavioural; that parents selectively reinforce and praise appropriate behaviour and ignore or not reinforce inappropriate behaviour (Kaplan, Sadock & Grebb, 1994).

APPENDIX B

Internalising Disorders

Somatoform Disorders

The somatoform disorders are a group of disorders that feature the presence of physical symptoms (e.g., nausea, pain, dizziness) which cannot be medically explained and, in the clinician's opinion are largely due to psychological factors. The child with a somatoform disorder is not seen as 'faking it' as a result of conscious malingering or because they want to be looked upon as a patient, as with factitious disorder. The somatic symptoms and complaints are serious enough to cause significant emotional distress or impairment in the child's ability to function in social and academic roles. Somatoform disorders however, usually begin during adolescence but may have onset in childhood.

Somatization disorder itself is characterised by many physical complaints affecting multiple organs, while conversion disorder is characterised by one or two neurological complaints. Hypochondriasis features less of a focus on specific symptoms, concentrating more on the belief that the child is suffering from a specific disease. Body dysmorphic disorder on the other hand, centres on the false belief or exaggerated perception that a particular part of the body is defective.

Eating Disorders

The eating disorders anorexia nervosa and bulimia nervosa have increasing reports in prepubertal girls and in males (Marchi & Cohen, 1990), though the most common age of onset for anorexia nervosa is in the mid teenage years and in the later teen years for bulimia nervosa. Anorexia nervosa is characterised by a profound disturbance in body image and the relentless pursuit of thinness, often to the point of starvation. Bulimia nervosa conversely, consists of recurrent episodes of eating large amounts of food paired with a feeling of being out of control. This binge eating is usually ceased either by a social interruption or by physical discomfort (e.g., nausea, stomach pain) followed by feelings of guilt, depression, or self-disgust. The bulimic child then attempts to

compensate by purging (e.g., causing themselves to vomit, repeated overuse of laxatives, or diuretics) or by other non-purging techniques; such as fasting or excessive exercise, in order to prevent weight gain (Striegel-Moore, Silberstein, & Rodin, 1993; Walters, Neale, Eaves, Heath, Kessler, & Kendler, 1993).

Elimination Disorders

The elimination disorders are a subset of two disorders known as enuresis and encopresis. Enuresis is the voluntary or involuntary voiding of urine into the clothes or bed beyond the developmental or chronological age of five years. Encopresis can also be voluntary or involuntary, and is the voiding of faeces in inappropriate places beyond the age of 4 years. Both must have been present for at least 3 months, and the enuresis must occur at least twice weekly to satisfy DSM-IV diagnosis.

Selective mutism is an uncommon childhood condition, where a child who has previously been fluent with language consistently fails to speak in specific social situations. They may fail to speak at school or kindergarten, though they usually speak fluently at home and in familiar settings. Most children with selective mutism are completely silent, but some whisper or use mono-syllabic words, others communicate with eye contact or gesture.

Mood Disorders

Mood disorders are disorders where the critical pathology is one of mood, the sustained internal emotional state of a person, and not one of affect, the external expression of present emotional content. Children who experience sustained durations (episodes) of depressed mood, irritability, or loss of interest (accompanied by at least four additional symptoms or depression) are said to have major depressive disorder. The rate of major depressive disorder in preschoolers has been estimated to be about 0.3 percent in the community. Among school-age children, about 2 percent have major depressive disorder, and is more common in boys than girls (Kazdin, 1990).

Dysthymic disorder requires the child to have been experiencing a depressed or irritable mood for at least a year, and for the accompanying symptoms (e.g., poor self-esteem,

pessimism or hopelessness, social withdrawal) to not be severe enough to meet the criteria for major depressive disorder (Pataki & Carlson, 1990). Clinicians disagree about whether dysthymic disorder is a chronic and insidious version of major depressive disorder or a separate disorder.

Bipolar I disorder is also relatively rare in prepubertal children and often takes years to diagnose. Children with bipolar I disorder swing from periods (episodes) of depression to episodes of mania. During the episodes of mania, the child may become hyperexcitable, extremely elated, punctuated by excessive motor activity, and a flight of ideas. The difficulty in diagnosis arises because these episodes of mania typically do not begin until they are adolescents (Pataki & Carlson, 1992).

Like dysthymic disorder can be said to be a mild version of major depressive disorder, so can cyclothymic disorder be called a symptomatically mild version of bipolar I disorder. Cyclothymic disorder is characterised by episodes of hypomania (a less severe version of mania) and episodes of mild depression; it is also very rare in prepubertal children.

APPENDIX C

The Subcategories of Anxiety

A simple phobia is the irrational fear of an object, activity or situation that leads to conscious avoidance. Either the presence of the feared stimuli or the anticipation of its presence elicits severe distress for the person, who recognises that the reaction is excessive. Nevertheless, the phobic reaction results in a disruption of the person's ability to function in life. Simple phobias that are common in children include the fear of animals, heights, darkness, and thunderstorms (Ollendick, 1979). Anderson, Williams and McGee (1987) in a New Zealand epidemiology study of eleven year old children from the general population found that 2.4% of the children had simple phobias and 0.9% had social phobias. However, when they used an additional source for information as a requirement to make the diagnosis, none of the children were diagnosed to have simple or social phobias. Strauss, Lease and Last (1988) in a study of children referred for anxiety disorders found 31% were diagnosed with phobic disorders. Of these, 8.8% has social phobia; 10.5% had simple phobias; and 16.9% had school phobia.

School phobia is a specific fear of going to school and is only experienced by children. Social phobia on the other hand is experienced by individuals of all ages, and is the persistent fear of one or more situations in which the individual feels they are being scrutinised or criticised by others. This fear also extends to the individual feeling they may do or act in such a way that will embarrass or humiliate them. Examples of social phobias are speaking in public (sometimes at all) for fear of a humiliating mistake, choking on food when eating in public or writing in front of others (their handwriting may be seen to cause embarrassment or they may freeze during writing).

Panic disorder describes the individual who experiences panic attacks. These panic attacks are of a relatively short duration (usually less than an hour) where the individual experiences intense anxiety or fear accompanied with several possible physical symptoms. These symptoms often include heart palpitations, perspiration, shaking, and dizziness. It is no surprise then that it is medical practitioners who most often first see

individuals experiencing panic attacks, and perhaps the reason why many are misdiagnosed with possible serious medical conditions such as myocardial infarction. The panic attacks can occur frequently within a short period of time or only two or three times within a year, but the unpleasantness of these attacks is why panic disorder is often accompanied by agoraphobia. In agoraphobia, there is a fear of being in a place or situation from which escape is difficult or impossible. Often the central fear is that should the individual experience a physical problem (e.g., loss of bladder or bowel control, dizziness, panic attack) help might not be available. This invariably leads to the individual either staying at home or leaving only when accompanied with a trusted companion.

Posttraumatic stress disorder occurs after experiencing an emotional stress that could be considered to be traumatic to almost anyone. The most common trauma for males is usually combat experience, and for females it is assault or rape, though natural catastrophes and serious accidents can also result in post traumatic stress disorder in either gender. Posttraumatic stress disorder is most prevalent in young adults but can also occur in childhood. The lifetime prevalence of posttraumatic stress disorder is estimated to be from 1 to 3 percent of the general population, although an additional 5 to 15 percent may experience subclinical forms of the disorder (Kaplan, Sadock & Grebb, 1996).

Posttraumatic stress disorder consists of (a) re-experiencing the trauma through dreams and waking thoughts, (b) the persistent avoidance of reminders of the trauma and the numbing of responsiveness to these reminders, and (c) persistent hyperarousal (American Psychiatric Association, 1996). Husain and Kashani (1992) posit that children are vulnerable to certain behavioural changes in response to posttraumatic stress according to their age. For example, preschool children are most likely to exhibit decreased verbalisation and cognitive confusion. School aged children tend to react with aggressive or inhibited behaviour, while adolescents often show a premature movement toward independence or an increased dependence.

Two stressors that are the most likely to induce posttraumatic symptoms in children are the serious threat to the child's family members or a close friend's life and witnessing injury or death as a result of an accident or physical violence. Specific experiences, such as witnessing the grotesque or hearing cries of distress, can intensify the recall of the traumatic experience (Husain & Kashani, 1992). The greater the impact of the event, the more likely there will be a traumatic response. In addition, a child's response is more severe and their actions last longer when the traumatic event is associated with human accountability (e.g., human error), in contrast to a natural disaster (Husain & Kashani, 1992).

Those children at highest risk of developing posttraumatic stress disorder are those who were in immediate threat of death, were present in the impact zone, who suffered severe injury, and who witnessed the death or injury of family members or friends (Husain & Kashani, 1992). There are no estimates of the prevalence of posttraumatic stress disorder specifically in children. Pynoos (1990) however, suggest the potential extent of children's exposure to stressors can be seen in the data on disasters and domestic violence. In 1985, the United States of America recorded 19,000 homicides, of which between ten and twenty percent were witnessed by children. Given the ever-increasing homicide rate in not only the United States of America but also New Zealand, we could expect this number to have grown substantially in the intervening fourteen years.

Acute stress disorder is a new DSM-IV (American Psychiatric Association, 1996) classification that is used when the posttraumatic symptoms stated above occur within four weeks of the traumatic event and in whom the symptoms last for two days to four weeks.

Separation anxiety disorder is another condition that has features consistent with normal development. It is completely normal for a child to exhibit anxiety when separated from a loved one, especially at pivotal times like the first time ever they are away from their primary caregiver or first go to school. What distinguishes separation anxiety disorder from normal developmental anxieties is the excessiveness, persistence, and unrealistically based worry that occurs at times other than what is developmentally

appropriate. The worries may take the form of refusing to go to school, fears and distress on separation, repeated complaints of headaches and stomach aches, or other physical symptoms, when separation is anticipated, and nightmares regarding separation issues. Kaplan, Sadock and Grebb (1994) estimated three to four percent of all school aged children to have separation anxiety disorder with onset occurring most commonly at around seven to eight years. They also assert that separation anxiety disorder is equally distributed between boys and girls.

APPENDIX D

Brief Questionnaire

Parent Version

SOME MORE BRIEF QUESTIONS...

Below are some more questions. Pick the answer which *best* describes your child. The responses you may have are:

L = A lot of the time S = Sometimes O = Not very often N = Almost never

Does your child:

- | | | | | |
|---|---|---|---|---|
| 1. Worry about not meeting his/her commitments | L | S | O | N |
| 2. Get concerned about expectations | L | S | O | N |
| 3. Get concerned about achieving high enough | L | S | O | N |
| 4. Have strange thoughts that no one else seems to have | L | S | O | N |
| 5. Think things and do things over and over again which makes him/her feel anxious and sad | L | S | O | N |
| 6. Do sports and other things outside of home and school | L | S | O | N |
| 7. Do certain things or think certain things even though he/she knows he/she does them too much | L | S | O | N |
| 8. Do certain things or think certain things even though he/she knows they are for no real reason | L | S | O | N |

Is your child:

- | | | | | |
|---|---|---|---|---|
| 9. Ambitious | L | S | O | N |
| 10. Withdrawn | L | S | O | N |
| 11. Isolated | L | S | O | N |
| 12. Suspicious | L | S | O | N |
| 13. Interested in being around others | L | S | O | N |
| 14. Frustrated by being "obsessed" by certain thoughts and having to do the same things over and over again | L | S | O | N |
| 15. Confused by having to do these things over and over again | L | S | O | N |
| 16. Very good at his/her school work | L | S | O | N |

Child Version

SOME MORE BRIEF QUESTIONS...

Below are some more questions. Pick the answer which *best* describes your child. The responses you may have are:

L = A lot of the time S = Sometimes O = Not very often N = Almost never

Do you:

- | | | | | |
|---|---|---|---|---|
| 1. Worry about not meeting your commitments | L | S | O | N |
| 2. Get concerned about expectations | L | S | O | N |
| 3. Get concerned about achieving high enough | L | S | O | N |
| 4. Have strange thoughts that no one else seems to have | L | S | O | N |
| 5. Think things and do things over and over again which makes you feel anxious and sad | L | S | O | N |
| 6. Do sports and other things outside of home and school | L | S | O | N |
| 7. Do certain things or think certain things even though you know you do them too much | L | S | O | N |
| 8. Do certain things or think certain things even though you know they are for no real reason | L | S | O | N |

Are you:

- | | | | | |
|---|---|---|---|---|
| 9. Ambitious | L | S | O | N |
| 10. Withdrawn | L | S | O | N |
| 11. Isolated | L | S | O | N |
| 12. Suspicious | L | S | O | N |
| 13. Interested in being around others | L | S | O | N |
| 14. Frustrated by being "obsessed" by certain thoughts and having to do the same things over and over again | L | S | O | N |
| 15. Confused by having to do these things over and over again | L | S | O | N |
| 16. Very good at your school work | L | S | O | N |

APPENDIX E

CBCL ITEMS SELECTED

Parent Report of Anxiety

- 11. Clings to adults or too dependent
- 29. Fears certain animals, situations, or places, other than school
- 30. Fears going to school
- 31. Fears he/she might think or do something bad
- 32. Feels he/she has to be perfect
- 42. Would rather be alone than with others
- 44. Bites fingernails
- 45. Nervous, highstrung, or tense
- 46. Nervous movements or twitching
- 50. Too fearful or anxious
- 56c. Physical problems without known medical cause: Nausea, feels sick
- 56f. Physical problems without known medical cause: Stomachaches or cramps
- 71. Self-conscious or easily embarrassed
- 75. Shy or timid
- 111. Withdrawn, doesn't get involved with others
- 112. Worries

* Item numbers above refer to CBCL item numbers.

Parent Report of Depression

- 12. Complains of loneliness
- 13. Confused or seems in a fog
- 14. Cries a lot
- 24. Doesn't eat well
- 33. Feels or complains that no one loves him/her
- 35. Feels worthless or inferior
- 42. Would rather be alone than with others

- 52. Feels too guilty
- 77. Sleeps more than most kids during day
- 80. Stares blankly
- 86. Stubborn, sullen, or irritable
- 88. Sulks a lot
- 100. Trouble sleeping
- 102. Underactive, slow moving, or lacks energy
- 103. Unhappy, sad, or depressed
- 111. Withdrawn, doesn't get involved with others

* Item numbers above refer to CBCL item numbers.

Parent Report of OCD

- 9. Can't get his/her mind off certain thoughts; obsessions
- 17. Day-dreams or gets lost in his/her thoughts
- 31. Fears he/she might think or do something bad
- 32. Feels he/she has to be perfect
- 50. Too fearful or anxious
- 66. Repeats certain acts over and over; compulsions
- 69. Secretive, keeps things to self
- 83. Stores up things he/she doesn't need
- 84. Strange behaviour
- 85. Strange ideas
- 99. Too concerned with neatness or cleanliness
- 112. Worries

* Item numbers above refer to CBCL item numbers.