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# The subjective experience of children with anxiety disorders: a record review at the Charlotte Maxeke Johannesburg Academic Hospital

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# THE SUBJECTIVE EXPERIENCE OF CHILDREN WITH ANXIETY DISORDERS: A RECORD REVIEW AT THE CHARLOTTE MAXEKE JOHANNESBURG ACADEMIC HOSPITAL

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A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfillment of the requirements for the degree of Master of Medicine in the branch of Psychiatry.

Johannesburg 2013

# DECLARATION

I, Engelina Groenewald, declare that this research report is my own work. It is being submitted for the degree of Master of Medicine in the branch of Psychiatry in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

.....

30th day of May, 2013

# DEDICATION

This work is dedicated to my parents,

Wilhelm and Geertje Groenewald,

who instilled in me a love for learning.

# ABSTRACT

**Aim**: To investigate the subjective experience of children diagnosed with anxiety disorders and the presenting complaints that children with anxiety disorders are referred with to a child and adolescent psychiatry unit.

**Methods**: The study was a retrospective record review of children and adolescents who presented to the Child and Adolescent Family Unit (CAFU) of the Charlotte Maxeke Johannesburg Academic Hospital. The records of fifty children diagnosed with anxiety disorders by a consultant child psychiatrist in the CAFU during the period of 2007-2009 were reviewed. The main complaints listed in the clinical interview were recorded. The subjective experiences that emerged from the interview and projective tests were also recorded. Demographics and comorbid diagnoses were obtained from the records.

**Results:** During the study period, only 13 of the 50 children who were diagnosed with an anxiety disorder, presented with anxiety as a main complaint. Other complaints with which the children frequently presented were poor school performance (68%, $N = 34$), aggression (62%, $N = 31$), poor concentration (56%, $N = 28$) and being quiet and withdrawn (42%, $N = 21$).

The most frequent subjective experiences were: anxiety (90%, *N* = 45), a need for more emotional support (84%, *N* = 42), feeling isolated and alone (82%, *N* = 41) and feeling inadequate (82%, *N* = 41).

The mean age of the children was 9, 3 years and 18 of them were female. Most children (*N* = 27) were diagnosed with generalised anxiety disorder. Diagnoses comorbid to the anxiety disorder were: attention deficit hyperactivity disorder (48%, *N* = 24), learning disorder (36%, *N* =18), attachment difficulties (30%, *N* = 15), depression (24%, *N* =12), elimination disorder (14%, *N* = 7) and one child presented with conduct disorder.

**Conclusion:** Most children with anxiety disorders present with initial complaints other than anxiety. Children with anxiety disorders experience a wide range of subjective experiences in addition to feeling anxious. It is important that medical and mental health practitioners are aware of this and explore further.

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# NOMENCLATURE

Anxiety disorder NOS: Anxiety disorder not otherwise specified

APA: American Psychiatric Association

CAFU: Child and Adolescent Family Unit

CAT: Children's Apperception Test

DAP: Draw-a-Person Test with clinical interview

DSM IV - TR: The Diagnostic and Statistical Manuel of Mental Disorders, Fourth Edition, Text Revision

FSSR-R: Fear Survey Schedule for Children – Revised

GAD: Generalised anxiety disorder

ICD–10: Tenth revision of the International Classification for Diseases and Related Health Problems

IQ: Intelligence Quotient

MASC: Multidimensional Anxiety Scale for Children

OCD: Obsessive compulsive disorder

PTSD: Post traumatic stress disorder

RCADS: Revised Child Anxiety and Depression Scale

RCMAS: Revised Children's Manifest Anxiety Scale

SASH study: South African Stress and Health study

STAI-C: State Trait Anxiety Inventory for Children

SCARED: Screen for Child Anxiety Related Emotional Disorders

SCAS: Spence Children's Anxiety Scale

TAT: Thematic Apperception Test

# 1.0 INTRODUCTION

Anxiety disorders are among the most common psychiatric disorders in children and adolescents and can lead to severe impairment and negative consequences if they are not diagnosed and adequately treated (Nevo & Manassis, 2009). If they are timeously and effectively managed, they have a good prognosis and early treatment may prevent the development of secondary consequences. However, for anxiety disorders to be adequately treated, they need to be recognised and diagnosed accurately.

Research indicates that only a small percentage of patients with anxiety disorders are correctly diagnosed (Seedat *et al.*, 2009). One possible reason could be that current diagnostic systems require a subjective experience of anxiety or distress to make the diagnosis of any anxiety disorder (APA, 2000). However, children often find it difficult to verbalise emotions such as anxiety or fear. They, therefore, often present with other complaints, such as somatic complaints or oppositional behaviour. Children or adolescents who present with these symptoms but fail to verbalise the "core symptom" (i.e. anxiety) may be misdiagnosed or underdiagnosed with regards to their anxiety disorder.

A subjective experience of anxiety is listed as a criterion in all anxiety disorders (APA, 2000) but other subjective experiences that the child might have are neither described in the Diagnostic and Statistical Manuel of Mental Disorders, Fourth Edition, Text Revision (DSM IV - TR) nor researched adequately. An understanding

of children's subjective experiences may assist practitioners in recognising anxiety disorders in children more readily and can potentially improve the parenting and psychotherapy process.

The aim of this study was to explore the subjective experiences of children with anxiety disorders and to look at the main complaints with which these children present to a child psychiatry clinic. The study is a record review of children attending a child and family unit for treatment of anxiety disorders.

The literature review will cover the prevalence, consequences, diagnosis and treatment of anxiety disorders in children. The study will entail a record review of the presenting problems of children with anxiety disorders in a child and family unit. The descriptions of the children will be gleaned from the child psychiatric interviews undertaken with each child as part of standard procedure during child psychiatric evaluations. In addition, a review of the findings of the projective tests that formed part of the children's psychological evaluation will be considered. The outcomes of these assessments and psychiatric evaluations of children presenting with anxiety disorders in a child and family unit will be summarised, described and discussed. Recommendations for future research will be made.

# 2.0 LITERATURE REVIEW

## 2.1 Prevalence of anxiety disorders in children

Anxiety disorders are among the most common psychiatric disorders in children (Nevo & Manassis, 2009; Verhulst, Van der Ende, Ferdinand & Kasius, 1997) and adults (Herman *et al.*, 2009). Regarding children and adolescents in the general population, the estimated lifetime prevalence of anxiety disorders ranges from 8,3% to 28,8% (Costello, Egger & Angold, 2005a; Kessler, Berglund, Demler, Jin & Walters, 2005). In the National Comorbidity Survey Replication Adolescent Supplement, anxiety disorders were the most prevalent group of mental disorders in the adolescents studied with a twelve-month prevalence of 31,9% (Kessler *et al.*, 2012; Merikangas *et al.*, 2010). In a recent study done in Santiago, Chile, the twelve-month prevalence of anxiety disorders in children and adolescents was 20% (Vincente, De la Barra, Saldivia, Kohn, Rioseco & Melipillan, 2012) whereas the six-month prevalence for any anxiety disorder was 23,5% in a Dutch sample of adolescents (Verhulst *et al.*, 1997).

Similarly, in South Africa, the South African Stress and Health (SASH) study, showed a lifetime prevalence of 15,8% for anxiety disorders (Herman *et al.*, 2009) and a projected lifetime risk for the development of an anxiety disorder of 30,1% (Herman *et al.*, 2009). The twelve-month prevalence of anxiety disorders was

8,1%, and 8,8% of all participants were diagnosed with an anxiety disorder before the age of eighteen years.

Childhood and adolescence is an important risk phase for the development of anxiety disorders (Beesdo, Knappe & Pine, 2009) as most emerge during childhood and early adolescence (McGorry, Purcell, Goldstone & Amminger, 2011). In Santiago, Chile, the highest prevalence of anxiety disorders was in children aged four to eleven years (23,2%). In adolescents aged twelve to eighteen years, the lifetime prevalence was 16,4% (Vicente *et al*., 2012). Strydom, Pretorius and Joubert (2012) found that a significant number (61,2 %) of Grade 11 and 12 school pupils in Bloemfontein suffered from anxiety in varying degrees. In the National Comorbidity Survey Replication Adolescent Supplement, the onset of anxiety disorders was before the age of six years in 50% of adolescents affected by these disorders (Merikangas *et al*., 2010). Rates of psychiatric pathology and patterns of comorbidity in pre-schoolers were similar to those of older children (Egger & Angold 2006).

## 2.2 Consequences of anxiety disorders in children

Without adequate treatment, anxiety disorders in children can lead to a decreased quality of life (Bastiaansen, Koot & Ferdinand, 2004), significant functional impairment, poor school performance (Ishikawa, Oota & Sakano, 2003; Myer *et*

*al*., 2009), substance abuse (Smith & Book, 2009), suicide attempts (Goldston, Daniel & Erkanli, 2009) and psychiatric disorders later in life (Fichter, Kohlboeck, Quadflieg, Wyschkon & Esser, 2009; Keller *et al*., 1992; Nevo & Manassis, 2009; Osone & Takahashi, 2006; Wiersma *et al*., 2009).

In the SASH study, children with early onset anxiety disorders were less likely to complete secondary education (Myer et al., 2009). Poor school performance and lower educational attainment often lead to socio-economic problems later in life (Myer *et al*., 2009; Myer, Stein, Grimsrud, Seedat & Williams, 2008).

Untreated, anxiety disorders can lead to significant family psychopathology (Bell-Dolan, Last & Strauss, 1990). Children and adolescents have to complete crucial developmental tasks and anxiety disorders can result in a failure to do so (McGorry *et al*, 2011; Nevo & Manassis, 2009) as these children often avoid developmentally appropriate activities and experience difficulties in social and academic settings (Chorpita, Yim, Moffitt, Umemoto & Francis, 2000).

If anxiety disorders in children are left untreated, they often persist into adulthood (Spence, 1998). A significant number of adults with anxiety disorders report that they experienced symptoms as children (Kendall, 1994). An early age of onset of anxiety disorders is associated with a longer duration of untreated illness and poorer outcomes (McGorry *et al*., 2011). Anxiety disorders in children do not only lead to homotypic continuity (further episodes of the same disorder later in life)

but also often lead to heterotypic continuity (other psychiatric conditions develop later in life) (Costello, Egger & Angold, 2005b; Nevo & Manassis, 2009).

## 2.3 Treatment of anxiety disorders in children

Effective treatment for anxiety disorders is available and consists of psychotherapy (a range of supportive psychotherapy, cognitive behavioural therapy, parental and family counselling) and medication with antidepressants. These treatments, either alone or in combination, are efficacious, and decrease distress and functional impairment in children and adolescents (Connolly, Suarez & Sylvester, 2011; Nevo & Manassis, 2009). Educational support and psycho-education have also been shown to be effective (Connolly *et al.*, 2011). Anxiety disorders in children have a good prognosis when treated with the above modalities (Nevo & Manassis, 2009) and early detection and treatment may prevent secondary difficulties such as decrease in quality of life and functional impairment (Connolly *et al.*, 2011; McGorry *et al.*, 2011).

## 2.4 Diagnosis of anxiety disorders in children

For anxiety disorders to be adequately treated, they need to be recognised and diagnosed accurately, however, research indicates that only a small percentage of patients are correctly diagnosed (McGorry *et al.*, 2011; Seedat *et al.*, 2009).

The Diagnostic and Statistical Manuel of Mental Disorders, Fourth Edition, Text Revision (DSM IV-TR; APA, 2000) can be used to diagnose anxiety disorders in children. The DSM IV-TR is a categorical classification, compiled by the American Psychiatric Association (APA) that divides mental disorders into types based on criteria sets with defining features (APA, 2000). It is a multi-axial system which involves an assessment on several axes, each of which refers to a different domain of information that may help the clinician to plan treatment and predict outcome (Pretorius, 2001). The DSM IV-TR describes twelve types of anxiety disorders in adults (APA, 2000). These are generalised anxiety disorder (GAD), social anxiety disorder, specific phobia, panic disorder (with and without agoraphobia), agoraphobia, post-traumatic stress disorder (PTSD), obsessive compulsive disorder (OCD), acute stress disorder, anxiety disorder due to a general medical condition or substances, and anxiety disorder not otherwise specified. In children, separation anxiety disorder is added to this list (APA, 2000).

In both the DSM IV-TR and the tenth revision of the International Classification for Diseases and Related Health Problems (ICD-10; World Health Organization, 1992), a "subjective experience of anxiety or distress" is a prerequisite to make the diagnosis of any anxiety disorder. However, children find it difficult to verbalise emotions such as anxiety or fear (Costello *et al.*, 2005b) and, consequently, often present with other symptoms, such as somatic complaints or oppositional behaviour. Children or adolescents who present with these symptoms but fail to verbalise the "core symptom" of anxiety are often underdiagnosed or misdiagnosed. For this reason, contemporary research in the field is focusing on

ways to identify anxiety disorders in community settings (Connolly *et al.*, 2011). Recognising the range of complaints with which children present, can help clinicians to consider further exploration of symptoms in such children and thereby make accurate diagnoses.

Several self-report scales and structured diagnostic interviews have been developed to assist in the diagnosis of anxiety in children. However, a limitation is that most of the scales remain downward modifications of existing adult criteria. Children are expected to express their emotions verbally despite not necessarily having the cognitive or verbal abilities to do so (Costello *et al.*, 2005b).

## 2.5 Presenting complaint

Very little is mentioned in the diagnostic criteria of anxiety disorders regarding the behavioural manifestation of anxiety in children (APA, 2000). It may be assumed that the experience of anxiety, in adults or children, leads to avoidance behaviours in certain situations – e.g. this is noted in social anxiety disorder as well as in PTSD. However, clinical experience suggests that children often present with other behaviours, such as aggression or inattention, which are not mentioned as manifestations of anxiety in the DSM IV-TR (L.E. Holford, personal communication, April 5, 2009). In the DSM IV-TR the criteria and diagnoses for anxiety disorders have been validated for adults but not for children. Instead the adult criteria have merely been adjusted to meet the needs of children.

For example, GAD requires at least three of the following symptoms in adults: "restlessness or feeling keyed up or on edge, being easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension and sleep disturbance" (APA, 2000, p.476). In children, the same criteria are used but instead of three symptoms, only one symptom is required to make the diagnosis. In the proposed DSM V criteria, only one symptom will be required for both adults and children (Andrews *et al.*, 2010).

However, in the criteria for social anxiety disorder, more adjustments are made for children: "In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer settings, not just in interactions with adults" (APA, 2000, p. 456). It makes provision for the fact that anxiety can be expressed as "crying, tantrums, freezing, or shrinking from social situations with unfamiliar people" (APA, 2000, p.456). Although an adult needs to recognise that the fear is excessive or unreasonable, this feature may be absent in children. In children under eighteen years, the duration of symptoms has to be at least six months.

None of the symptoms that are used to diagnose anxiety disorders in children are specific to children and little attention is given to the emotional and behavioural problems of preschool children (Egger & Angold, 2006).

Several other behavioural presentations of anxiety have been described in the literature and these include:

Behavioural inhibition

Behavioural inhibition or shyness is a symptom which commonly occurs in children. Behavioural inhibition is associated with anxiety disorders and other anxiety-related symptoms, even though not every child with an anxiety disorder displays this (Muris, Van Brakel & Arntz & Schouten, 2011). Behavioural inhibition may lead to children failing to acquire certain social skills which may in turn lead to social isolation and negative or distorted cognitions (Nevo & Manassis, 2009).

Behavioural inhibition is usually seen as a temperamental characteristic which can act as a risk factor for the development of anxiety disorders. However, it is possible that this temperamental characteristic may be an early manifestation of the disorder itself (Egger & Angold, 2006). Behavioural inhibition can therefore act as both a risk factor for and a symptom of anxiety disorders.

Somatic symptoms

The DSM IV-TR criteria for GAD place a strong emphasis on somatic symptoms of anxiety. The prevalence of somatic symptoms in children with anxiety disorders is estimated to be between 12-62% (Beidel, Christ & Long, 1991). Anxiety disorders often present with somatic symptoms in Asian populations (Hinton, Park, Hsia, Hofmann & Polack, 2009). However, children struggle to attribute physical symptoms to anxiety and children's ability to perceive physical symptoms as a sign of anxiety is directly related to their age and cognitive development (Muris, Mayer, Freher, Duncan & Van den Hout, 2010).

Nevertheless, somatic symptoms occur more often in children with anxiety disorders than in normal controls (Beidel *et al*., 1991). For many years it has been assumed that somatic symptoms in children mostly consisted of stomach aches and headaches. However, these are not the most common expression of anxiety, and the range of somatic symptoms appears to be much broader than previously believed (Beidel *et al*., 1991). Other somatic symptoms with which children with anxiety disorders commonly present, are headaches, nausea, dizziness and a sense of choking (Beidel *et al*., 1991).

Depression

Anxious and depressive disorders frequently overlap and occur comorbid with each other (Chorpita *et al*., 2000; Fergusson, Horwood & Ridder, 1993). A strong correlation between anxiety and depressive symptoms is found in both children and adults (Snyder *et al*, 2009).

Anxiety disorders in children often precede depression in adolescence and adulthood (Lewinsohn, Gotlib & Seeley, 1995; Rice, Van den Bree & Thapar, 2004). Two explanations for the association have been explored in the literature. The first is that anxiety in childhood is a risk factor for the development of a major depressive disorder later in life (Lewinsohn *et al*., 1995) and the second is that anxiety and depression share a common genetic aetiology (Rice *et al*., 2004). Evidence for the latter explanation can be found in genetic epidemiological studies which show a strong relationship between depression and anxiety disorders in first degree relatives of identified patients (Weissman, Leckman, Merikangas, Gammon

& Prusoff, 1984). An anxiety disorder in a parent increases the risk of depression in the child and the presence of depression and an anxiety disorder in a parent increases the risk of both disorders in the child (Weissman *et al*., 1984).

Depression can be a presenting complaint, observable by teachers and parents, and a subjective experience of the child. Notably, anxiety symptoms reported by a teacher, are strong predictors of depressive symptoms in children (Snyder *et al*., 2009). Teacher and parent reports are often not as reliable as the direct interview with the child done by a skilled mental health practitioner (March, Parker, Sullivan, Stallings & Conners, 1997; Weitkamp, Romer & Rosenthal, 2010) but teachers are better than parents at predicting symptoms of depression (Snyder *et al*, 2009).

Irritability

Irritability has long been associated with depression and anxiety in adults. Stringaris (2011, p. 61) described irritability as "easy annoyance and touchiness… characterised by the emotion of anger, and temper outbursts can be its behavioural manifestations". Irritability is common in children and adolescents and has a strong relationship with depressive and generalised anxiety disorders (Stringaris, 2011). Irritability and anger or temper outbursts may be present in several anxiety disorders or may predict anxiety disorders later in life (Stringaris, 2011). Bubier and Drabick (2009) described a strong association between anxiety and reactive aggression.

Attachment

Attachment refers to the close emotional bonds of affection that develop between a child and his/her parent or caregiver and which subsequently influences the child's capacity to form mature intimate relationships in adulthood. Ainsworth (1978) described three types of attachment: secure, insecure resistant/ ambivalent and insecure avoidant attachment. A fourth type, insecure disorganised-disoriented, was added more recently (Main, 1996).

Ainsworth (1978) explained the styles of attachment using the Strange Situation Procedure. This involves a controlled setting in which mothers leave their young children in a room for a brief period while being observed by professionals. Children with secure attachment play comfortably with their mothers present, become upset when she leaves and are quickly calmed by her return. Children with insecure ambivalent attachment appear anxious when the mother is present, protests excessively when she leaves and are not comforted when she returns. When children have an insecure avoidant attachment style, they seek little contact when the mother is present and are not distressed when she leaves. Children with insecure disorganised - disoriented attachment have interrupted or confused strategies for obtaining comfort from the caregiver during the Strange Situation Procedure (Main, 1996).

Children with secure attachment have lower levels of somatic and panic symptoms, generalised anxiety, social anxiety and school anxiety (Brumariu & Kerns, 2010). Alternatively, insecure attachment is associated with all types of

anxiety and influences the symptoms with which anxiety disorders present. Warren, Huston, Egeland and Sroufe (1997) found that the insecure ambivalent attachment style predicted anxiety disorders in children and adolescents. However, the study was done on a group of children who were at risk for developmental problems, who had a low socioeconomic status and whose parents were often unmarried (Warren *et al.*, 1997). Bar-Haim (2007), on the other hand, found that even though children with insecure ambivalent attachment had higher levels of anxiety symptoms (esp. school phobia), insecure ambivalent attachment was not associated with anxiety disorders in children and adolescents.

Courage

Working in the field of behaviour therapy, Muris, Mayer and Schubert (2010) have noted that courage, despite the experience of fear, is negatively correlated with anxiety symptoms. They suggest that a lack of courage may maintain and exacerbate the anxiety disorder as, according to the behavioural theory, avoidance of a fearful stimulus perpetuates anxiety. It is also apparent that by developing a pattern of avoidance a child will not develop sufficient confidence or adequate coping skills. This view has significant treatment implications as exposure to stimulus anxiety is an important aspect of developing mastery in the psychotherapeutic treatment of anxiety disorders (Muris *et al.*, 2010).

## 2.6 Subjective experience of children with anxiety disorders

Anxiety is defined by Sadock and Sadock (2003, p. 591) as a "diffuse, unpleasant, vague sense of apprehension, often accompanied by autonomic symptoms such as headache, perspiration, palpitations and stomach discomfort" and is a criterion in all of the anxiety disorders. However, a child may have other subjective experiences that are not described in the DSM IV-TR.

It is important to understand what children and adolescents with anxiety disorders are experiencing on a qualitative level as they often struggle to verbalise emotions (Costelllo *et al.*, 2005b). It is also noted that specific anxiety symptoms are expressed differently across ethnic groups (Gray, Carter & Silverman, 2010). Verbal skills differ across age groups with varying degrees of abstract reasoning and language development. An understanding of children's subjective experiences might assist practitioners in recognising anxiety disorders in children more easily resulting in earlier intervention. Understanding and acknowledgement of a child's emotions can potentially improve the parent-child relationship and the therapeutic alliance and may have many other significant implications for the parenting and psychotherapy process.

Bastiaansen, Koot and Ferdinand (2004) found that anxiety disorders have a negative impact on children's quality of life. Cramer, Torgersen and Kringlen

(2005) found that anxiety disorders influence the subjective experience of wellbeing, social support, negative life events, contact with family of origin and neighbourhood quality in adults.

Little research has been done to explore the subjective experience of children with anxiety disorders, as given by them, in direct individual interviews and projective psychological tests. In addition there has been a dearth of research on the subjective experience of children with anxiety disorders in the South African context.

An understanding of the child's subjective experience is important in order to make the diagnosis of an anxiety disorder. Chorpita (2000, p. 836) stated that the " lack of gold standard for assisting with diagnosis in child populations has consistently served as an obstacle to the systematic identification of disorders in children". Several self-report measures were developed to explore children's subjective experiences and to provide such a "gold standard". While many of these scales have been developed in specific clinical contexts or community settings, there remains no overall, accepted, standardised self-report measure. These scales will be discussed in further detail.

Self- report measures have been the primary method to obtain information on the subjective experiences of children with anxiety disorders since the 1960's (Chorpita *et al*, 2000; Myers & Winter, 2002). March, Parker and Sullivan (1997, p.555) stated that "some anxiety symptoms such as refusing to attend school in

the patient with panic disorder and agoraphobia, are readily observable; other symptoms are open only to child introspection and thus to child self-report". Self-report measures of anxiety in children were developed to give children an opportunity to reveal their "internal or hidden experience" (March *et al.*, 1997).

However, many self-report scales are merely downward modifications of adult scales and, thus, unsuitable for children (Myers & Winter, 2002; Spence, 1998). As the environment of children is different to that of adults, the presentation and experience of anxiety is also very different (March *et al.*, 1997) and self-report measures need to reflect this. Developmental differences need to be taken into account when devising self-report scales and assessing the child's subjective experience (Spence, 1998). Also, the presence of learning difficulties or cognitive impairment may limit self-report measures that require reading and writing skills. Finally, children who are anxious may also be reluctant to put their fears in writing. Clinical interviews which are based on rapport with a child may be more effective in encouraging disclosure of anxiety symptoms.

Some of the early self-report scales which tried to measure children's subjective experience include the Fear Survey Schedule for Children – Revised (FSSC-R; Ollendick, 1983), the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) and the State Trait Anxiety Inventory for Children (STAI-C; Spielberger, 1973). These scales are more than thirty years old and their clinical utility in contemporary society is questionable (March *et al.*, 1997). In addition,

these scales cover a different range and emphasis of anxiety symptoms which are not compatible with current diagnostic classification systems.

The FSSC-R measures mainly phobic symptoms such as fear of failure and criticism, fear of the unknown, fear of injury and small animals, fear of danger and death, and medical fears (March *et al.*, 1997; Ollendick, 1983). On the other hand, the RCMAS measures the physiological manifestations of anxiety, worry and oversensitivity, and concentration anxiety (March *et al.*, 1997; Reynolds & Richmond, 1979). Although the presence of mood, attention, impulsivity and peer integration items on the RCMAS may confound other diagnoses such as attention deficit hyperactivity disorder (ADHD) and depressive disorders (March *et al.*, 1997), these items give a comprehensive representation of the child's subjective experience. By contrast the STAI-C is a self-report scale which assesses a variety of anxiety symptoms but does not cover the symptom constellations of the DSM IV (March *et al.*, 1997).

March (1997) developed the Multidimensional Anxiety Scale for Children (MASC) which assesses four dimensions of anxiety expression: physical symptoms, harm avoidance, separation anxiety and social anxiety. It measures a range of anxiety symptoms in youth and is aligned with the DSM IV diagnostic categories for anxiety disorders. The MASC was developed to assess a wide variety of anxiety disorder symptoms in children and no assumptions about the clustering of anxiety symptoms were made when selecting items for the scale (March *et al.*, 1997). However, even though this scale was a large improvement on the earlier scales, it

does not take the actual subjective experiences of children into account and again is based on adult criteria and adults' assumptions about children's experiences.

A further screening scale for children is the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher *et al.*, 1997). This scale comprises five factors: somatic/panic, general anxiety, separation anxiety, social phobia and school phobia (Birmaher *et al.*, 1997). There are a few items which look at the subjective experience of children with anxiety disorders, i.e. "get scared if I sleep away from home", "worry about others liking me" and "worry about going to school". However, the SCARED is based on symptoms of anxiety in children in a clinical setting and is not necessarily generalisable to a community population (Birmaher *et al.*, 1997; Spence, 1998). The SCARED was also derived from the DSM IV diagnostic criteria of anxiety disorders for adults and it is not clear how accurately the DSM IV reflects the structure of anxiety disorders in children (Birmaher *et al.*, 1997).

The Spence Children's Anxiety Scale (SCAS) was created to provide information about the child's subjective experience and to correspond with current diagnostic criteria (Chorpita *et al.*, 2000). The factors of the SCAS are: panic/agoraphobia, social anxiety, separation anxiety, generalised anxiety, obsessions/compulsions and fear of physical injury (Chorpita *et al.*, 2000). The limitations of the SCAS are that it does not represent the DSM IV diagnosis of generalised anxiety in children and focuses on autonomic arousal symptoms of GAD even though those symptoms are not strongly associated with the disorder (Chorpita *et al.*, 2000).

Chorpita (2000) developed an adaptation of the SCAS to provide a better reflection of the current symptom construct of generalised anxiety disorder and to include symptoms of depression. The Revised Child Anxiety and Depression Scale (RCADS) was produced and includes items such as "worried when does poorly", "fears crowded places", "worries in bed at night", "worries about mistakes" and "worries about family".

Other subjective experiences in children with anxiety disorders described in the literature are negative thinking, low self-esteem, loneliness, depression and disgust.

Negative thinking

Negative thinking is commonly associated with anxiety. The three main forms of negative repetitive thinking are: emotion-focused rumination, stress-reactive rumination and worry. All three forms of repetitive thinking are associated with anxiety in children and adolescents (Rood, Roelofs, Bögels & Alloy, 2010). Worry can be defined as "a chain of thoughts and images that are negatively affect-laden and relatively uncontrollable" (Rood *et al.*, 2010, p. 334). Rood (2010) noted that worry is an integral element of GAD but also plays an important role in other anxiety disorders in children.

Low self-esteem

Low self-esteem is a strong predictor of psychopathology, including anxiety. There is a link between low self-esteem and behavioural and emotional problems

including anxiety. Leary, Schreinhover and Haupt (1995) have argued that this may be a reflection of the effects of social exclusion and perceived rejection, rather than the low self-esteem itself.

Loneliness

Asher, Hymel and Renshaw (1984) demonstrated that children who are rejected or neglected by their peers feel lonely and extremely dissatisfied with their social status. Although these authors did not explore an association between anxiety and loneliness, this was demonstrated in other studies (Leary *et al*.,1995; Storch, Brassard & Masia-Warner, 2003). Storch *et al*. (2003) demonstrated an association between peer victimisation, loneliness and social anxiety.

Depression

Depression can be a presenting complaint, observable by teachers and parents, and a subjective experience of the child. The strong association between depression and anxiety has been discussed above. However, anxiety can possibly lead to depression through other subjective experiences, such as rumination and worry, and attribution biases about failure, rejection and loss, and self-derogation (Snyder *et al*., 2009).

Disgust

Muris, Merckelbach, Schmidt and Tierney (1999) explored disgust as a contributing factor to anxiety symptoms in children. Disgust sensitivity was found

to be positively related to a broad spectrum of anxiety disorder symptoms (Muris *et al*., 1999).

## 2.7 Comorbidity

Comorbidity is common in psychiatric disorders, especially in child psychiatry, and causes significant impairment (Bubier & Drabick, 2009; Egger & Angold, 2006). Knowledge of comorbidity is important to obtain an understanding of the aetiology, course and treatment of psychiatric disorders (Egger & Angold, 2006).

The rates of comorbidity among anxiety disorders are 39% in children and 14% in adolescents in the general population; and 50% in clinic populations (Anderson, Williams & McGee, 1987; Kashani & Orvaschel ,1990; McGee, Feeham & Williams, 1992). The most common disorders comorbid with anxiety disorders in children are other anxiety disorders (Martin *et al*., 2007; Spence, 1998). This is followed by depression, and then ADHD (Martin *et al*., 2007). Selective mutism and school refusal are also commonly associated with anxiety disorders (Martin *et al*., 2007). However, while it is noted that school refusal is not a formal psychiatric disorder in the DSM IV or ICD-10, it is subscribed within the diagnosis of generalised anxiety disorder.

Bipolar disorder, pervasive developmental disorders and substance disorders have been found to be comorbid with anxiety disorders in children and adolescents

(Brotman, Rich & Schmajuk, 2007; Deas-Nesmith, Brady & Campbell, 1998; Muris *et al*, 1999; Muris, Steerneman & Merckelbach, 1998; Sze & Wood, 2007). These disorders often manifest as behavioural problems with possible underlying or comorbid pathology such as depression, separation anxiety and learning disorders.

The Preschool Aged Psychiatric Assessment (PAPA) study found that comorbidity with other psychiatric disorders was common in preschool children (Costello *et al*., 2005b). It ranged from 53% of cases with GAD to 100% in cases of specific phobias. In this study, depression was the most common comorbid non-anxiety disorder.

Significant comorbidities were found among the phobias (specific phobia, social phobia and agoraphobia) and between anxiety disorders and depression in children. However, the association between panic disorder and separation anxiety was not significant (Costello *et al*., 2005b).

In a review of comorbidity with anxiety disorders, Angold, Costello and Erkanli (1999) reported that depression was 8,2 times more likely to occur in children with anxiety disorders than in children without anxiety disorders. Conduct disorder and oppositional defiant disorder were 3,1 times more likely to occur in children with anxiety disorders and ADHD was 3 times more likely to occur in these children. However, critics have noted that this could be because of diagnostic overlap i.e. irritability, which often occurs in anxious children, is a criterion for the diagnosis of oppositional defiant disorder and ADHD (Bubier & Drabick, 2009; Stringaris,

2011). Finally, the association between anxiety disorders and substance use or abuse disappeared once the comorbidity with other psychiatric disorders was controlled (Angold *et al.*, 1999).

The Oregon Adolescent Depression Study (Lewinsohn, Zinbarg, Seeley, Lewinsohn & Sack, 1997) showed that there was a strong association between depression and each of the anxiety disorders with the exception of OCD. Interestingly, ADHD was associated with simple phobia, OCD with oppositional defiant disorder, bipolar disorder with separation anxiety, and alcohol abuse or dependence with overanxious disorder.

Comorbidity between anxiety and depression in children ranges from 33% to 75% (Costello, Mustillo, Erkanli, Keeler & Angold, 2003). Anxiety disorders precede depressive disorders in most cases of comorbidity (Lewinsohn *et al.*, 1995; Snyder *et al.*, 2009). Depression and anxiety often overlap, predict each other developmentally and respond to the same treatment (Costello *et al.*, 2005b; Spence, 1998).

Behavioural and emotional disorders commonly co-occur with anxiety disorders as well (Egger & Angold, 2006). Studies of comorbidity show that oppositional defiant disorders are important in mediating the relationship between anxiety disorders and depression (Egger & Angold, 2006).

## 2.8 Demographic profile

The age of onset is earlier for anxiety disorders than for substance and mood disorders (Kessler *et al*., 2005). In the National Comorbidity Survey Replication, the median age of onset of specific phobia and separation anxiety disorder was seven years, social phobia thirteen years and the other anxiety disorders much later (Kessler *et al*., 2005). Social and specific phobias typically emerge during childhood, while GAD and panic disorder emerge during early adolescence and early adulthood (McGorry *et al*., 2011).

With regards to race, Gray *et al*. (2010) found that the prevalence rates of anxiety symptoms are similar in African-American and European-American children. However, African-Americans were less likely to present for treatment than European Americans (Gray *et al*., 2010). In the National Comorbidity Survey Replication, non-Hispanic blacks and Hispanics had a lower risk for developing anxiety disorders throughout their lives (Kessler *et al*., 2005). Conversely, in South Africa, coloured and black adolescents were found to have higher levels of anxiety than white adolescents (Muris *et al*., 2006). A possible explanation could be the higher rates of family psychopathology (including absent parents) in coloured and black South-Africans and/or a higher exposure to traumatic events (Herman *et al*., 2009; Muris *et al*., 2006; Vincente, Saldivia, De la Barra, Kohn, Pihan & Valdivia, 2012).

In the National Comorbidity Survey Replication study, women had a much higher risk for anxiety disorders than men (Kessler *et al*., 2005). In a community study of child and adolescent mental disorders in Chile (Vincente, Saldivia, De la Barra, Kohn, Pihan & Valdivia, 2012), girls were at a higher risk for social phobia and GAD than boys. Overall, the rates of anxiety disorders and mood disorders were higher in girls than boys in this study. Additionally, girls are more likely than boys to report an anxiety disorder (Costello *et al*, 2005b). In preschool children, no significant gender differences were found for anxiety disorders overall or for specific anxiety disorders (Costello *et al*., 2005b).

Psychopathology was associated with poorer family function, family psychopathology, and not living with both parents. There was an inverse relationship between family income and anxiety disorders in children (Vincente, Saldivia, De la Barra, Kohn, Pihan & Valdivia, 2012).

# 3.0 RESEARCH AIMS

The aim of this research is to elucidate the subjective experience of children diagnosed with anxiety disorders and to investigate the presenting complaints that children with anxiety disorders are referred with to a child and adolescent psychiatry unit.

The specific anxiety disorder diagnosis on Axis I, as well as the comorbid disorders in children who present with anxiety disorders, will be described.

At the same time, the demographic profile of these children and their parents will be noted.

# 4.0 RESEARCH OBJECTIVES

1. Subjective experience:

   What is the subjective experience of children with anxiety disorders?

   This will be based on:

   a) Clinical interview

   b) Draw-a-Person Test with clinical interview (DAP)

   c) Child Apperception Test (CAT) / Thematic Apperception Test (TAT)

   d) Sentence Completion Test

2. Presenting complaints:

   What are the complaints with which children present to a child and adolescent psychiatry unit?

   This will be based on parent/guardian reports and teacher reports.

3. Comorbidity:

   a) What is the specific anxiety disorder diagnosis on Axis I?

   b) What are the Axis I and Axis II diagnoses comorbid to the diagnosis of anxiety disorder on Axis I?

   This will be based on the psychiatric evaluation undertaken by a registered child psychiatrist in each case.

4. Demographic profile:

   What are the demographic data of patients diagnosed with an anxiety disorder, with specific reference to:

   a) Age (at which the child presented to unit)

   b) Level of education of the child

   c) Language of the child

   d) Gender of the child

   e) Marital status of parents

   f) Employment status of parents

# 5.0 METHOD

A record review of children and adolescents diagnosed with anxiety disorders was undertaken at the Child and Adolescent Family Unit (CAFU) situated in the Charlotte Maxeke Johannesburg Academic Hospital. This is a child psychiatry outpatient clinic.

The CAFU takes referrals from clinicians (medical practitioners, psychologists and nurses) and also accepts direct referrals from parents, teachers or social institutions. Once a referral gets accepted, a psychosocial history is undertaken. In addition to interviewing the parent(s) or guardian together with the child, the child is also assessed separately using a structured child psychiatry interview format.

Most patients then get referred for a psychological assessment. This consists of an intellectual assessment based on the Senior South African Individual Scale – Revised (SSAIS-R; Van Eeden, 1991; Van Eeden & Visser, 1992) and an emotional assessment of the child's subjective experiences. The emotional assessment consists of the child psychiatric interview (Holford & Smith, 1992), the Draw-a-Person Test with clinical interview (Machover, 1949), the Sentence Completion Test (a self-report test; Brown & Unger, 1992) and a projective test i.e. the Children's Apperception Test (CAT; Bellak & Bellak, 1998) or the Thematic Apperception Test (TAT; Murray & Morgan, 1935).

Because the DAP is regarded as a controversial tool by some (Ter Laak, de Goede, Aleva & Van Rijkswijk, 2005), the direct interview is done together with the DAP for each child at the CAFU. The CAT is done for children younger than ten years and for immature eleven and twelve year old children. The TAT is done for children older than twelve years.

## 5.1. Sample

The records of 50 children and adolescents diagnosed with anxiety disorders by a consultant child psychiatrist in the CAFU during the period of 2007-2009 were reviewed.

Inclusion criteria:

1. Only the files where the diagnosis of an anxiety disorder (any of the 13 types as listed by the DSM IV) was made on Axis I, were included in the study.
2. Only the files where a full psychological assessment was done were included in the study.

Exclusion criteria:

1. Children presenting with cognitive functioning in the moderate mentally handicapped range, or lower, were excluded as the verbal description of

subjective experiences in the interview may be too limited for thematic analysis.

## 5.2 Study design

The study is a retrospective record review.

The files of the Child and Adolescent Family Unit at the Charlotte Maxeke Johannesburg Academic Hospital were reviewed. The researcher looked specifically at the initial history, the clinical notes by the child psychiatrist, the psychological assessment and the demographic data in the files.

## 5.3 Method of data collection

Information in the files was obtained by reviewing the clinical notes, the psychosocial history, the psychological assessment and the demographic data in the file. All information was collected on a data collection sheet (addendum A).

## 5.4 Presenting complaint

The presenting complaints were listed in the initial clinical interview. These complaints were recorded on the data collection sheet.

Presenting complaints refer to those symptoms which are readily observed by others (usually caregivers/ teachers) and symptoms which are verbally expressed by the child. These symptoms are often the behavioural manifestations of the child's internal or subjective experiences. Some symptoms, such as depression, can be a both a behavioural manifestation (i.e. the child appears depressed to those around him/her) and a subjective experience (i.e. the child feels depressed).

## 5.5 Subjective experience

The subjective experience of the child diagnosed with an anxiety disorder was investigated by reviewing the psychological assessments; specifically the child interview (Holford & Smith, 1992), the Draw-a Person Test (DAP; Machover, 1949), the Child Apperception Test (CAT; Bellak & Bellak, 1998) or Thematic Apperception Test (TAT; Murray & Morgan, 1935) and the Sentence Completion Test (Brown & Unger, 1992). The clinical psychologist, who tests the patient, extracts prominent themes from the tests and interviews. Those themes were recorded on the data collection sheet under separate categories for each of the tests (i.e. child psychiatric interview, DAP, TAT and Sentence Completion Test).

If any theme occurred in more than one child, it was recorded and listed as a separate category. If a theme occurred only once, it was grouped under "other".

## 5.6 Data Analysis

All data, captured on the data collection sheet, were recorded on an Excel spread sheet.

An additional category, called "combined" was added for each of the most prominent themes. If a subjective experience occurred in a patient and was elicited by any one or more of the tests of subjective experience (i.e. the child psychiatric interview, DAP, CAT/TAT and Sentence Completion Test), it was listed in this category and counted.

The statistical data analysis was done using STATISTICA version 11 (StatSoft, 2012). STATISTICA is a statistics and analytics software package which provides data analysis and statistics procedures. Demographic information, presenting complaints, subjective experiences and DSM IV diagnoses were summarised by means, standard deviation, frequency and percentages for continuous and categorical variables respectively.

All presenting complaints and combined subjective experiences were compared with age and intelligence quotient (IQ) using the Mann Whitney U test, as the variables were not normally distributed. A significant difference was noted if the p-value was less than 0,05.

## 5.7 Ethics clearance

Ethics clearance for this study was granted by the Human Research Committee of the University of the Witwatersrand (addendum B). The ethics clearance number is M091114.

# 6.0 RESULTS

Following the review of the files of fifty children diagnosed with anxiety disorders at the Child and Family Unit of the Charlotte Maxeke Johannesburg Academic Hospital the following results emerged:

## 6.1 Demographic profile

### 6.1.1 Demographic profile of children

#### 6.1.1.1 Age

The mean age (at presentation to the unit) of the children whose records were included in the study, was 9,3 (*SD* = 2,5) years.

#### 6.1.1.2 Level of Education

The median level of education was grade 3 (*M* = 3,5).

### 6.1.1.3 Gender

Eighteen children in the sample were female and thirty two were male.

### 6.1.1.4 Language

Twenty two children spoke English as a first language, 13 children spoke Zulu, 2 children spoke Tswana, 1 child spoke Ndebele, 4 children spoke Afrikaans, 2 children spoke Pedi, 4 children spoke Sotho, 1 child spoke Xhosa and one child spoke French.

## 6.1.2 Demographic profile of parents/guardians

### 6.1.2.1 Marital status of parents

**Table 6.1** Marital status of parents

| **Marital status of parents** | **Number of children** |
|---|---|
| Never married | 16 |
| Married | 15 |
| Divorced | 8 |
| Separated | 4 |
| One or both parents deceased | 3 |
| Living together | 1 |
| Unknown | 3 |

The parents of 16 children were never married, 15 children's parents were married, 8 children's parents were divorced and 4 children's parents were separated. In 3 children, one or more parents were deceased, 1 child's parents were living together without being married and in 3 children the marital status of the parents was unknown.

#### 6.1.2.1 Employment

In 36 children, at least one parent was employed whereas the parents of 13 children were unemployed. In one child, the employment status of the parents was unknown.

## 6.2 Diagnosis

### 6.2.1 Primary diagnoses

**Table 6.2** Anxiety disorder diagnoses on Axis I

| **Diagnosis** | **Number of children** |
|---|---|
| Anxiety disorder not otherwise specified (NOS) | 18 |
| GAD | 27 |
| Separation anxiety disorder | 2 |
| Social anxiety disorder | 3 |
| PTSD | 1 |
| GAD & separation anxiety disorder | 1 |
| Social anxiety disorder & separation anxiety disorder | 1 |
| GAD & social anxiety disorder | 2 |

From Table 6.2 it is apparent that the anxiety disorder diagnoses of these patients were as follows: 18 had a diagnosis of anxiety disorder NOS, 27 children had a diagnosis of GAD only, 2 children had a diagnosis of separation anxiety disorder only, 3 children had a diagnosis of social anxiety disorder only and 1 child had PTSD only. Four children had more than one anxiety disorder diagnosis on Axis I: one of these children had GAD and separation anxiety disorder, 1 child was diagnosed with separation anxiety disorder and social anxiety disorder and 2 children were given a diagnosis of GAD and social anxiety disorder.

The mean age of the children in years with anxiety disorder NOS was 9,3 (*SD*=3,3). The mean age of the children with GAD was 9,19 (*SD*=1,9); separation anxiety disorder 8,89 (*SD*=2,7); social anxiety disorder 10,17 (*SD*=1,8) and PTSD 11.

In addition to a diagnosis of an anxiety disorder, 24 children were diagnosed with ADHD, 18 with a learning disorder, 15 with attachment difficulties, 12 with depression, 7 with an elimination disorder and 1 child with conduct disorder also on Axis I.

Twelve children were diagnosed with both a learning disorder and ADHD. 33,3% of the children with a learning disorder had ADHD as well whereas 50% of the children with ADHD had a learning disorder.

**Table 6.3** Diagnoses comorbid to the diagnosis of an anxiety disorder on Axis I

| **Diagnosis** | **Number of children** |
|---|---|
| ADHD | 24 |
| Learning disorder | 18 |
| Attachment difficulties | 15 |
| Depression | 12 |
| Elimination disorder | 7 |
| Conduct disorder | 1 |

## 6.2.2 Intellectual functioning as assessed by IQ

The average full scale IQ of the children whose files were reviewed, was 79.9 (*SD*=17,5). Twelve children had borderline intellectual functioning (IQ between 70 and 79) and 16 children had mild mental retardation (IQ between 50 and 69). Children with moderate, severe and profound mental handicap were excluded from the study.

**Table 6.4** IQ distribution as assessed by the SSAIS-R

| **IQ** | **Number of children** |
|---|---|
| Superior IQ (>120) | 1 |
| High average IQ (110-119) | 2 |
| Average IQ (90-109) | 11 |
| Low Average (80-89) | 8 |
| Borderline IQ (70-79) | 12 |
| Mild mental retardation (50-69) | 16 |

## 6.2.3 Medical conditions

As can be seen in Table 6.5 with regard to medical conditions listed on Axis III, 8 children had neurological conditions, 2 respiratory conditions, 2 cardiac conditions, 2 problems with vision and 2 were hearing impaired. One child was HIV positive, 1 child malnourished, 1 child had speech impairment, one had a pelvic fracture and one had dermatitis. The neurological conditions were epilepsy (*N*=4), previous encephalitis and meningitis, head injury and chronic headaches.

In sum 18 children had a medical diagnosis on axis III.

**Table 6.5** Medical conditions on Axis III

| **Medical condition** | **Number of children** |
|---|---|
| Neurological condition | 8 |
| Respiratory condition | 2 |
| Cardiac condition | 2 |
| Visual problems | 2 |
| Hearing impairment | 2 |
| HIV | 1 |
| Malnourishment | 1 |
| Speech impairment | 1 |
| Pelvic fracture | 1 |
| Dermatitis | 1 |

## 6.2.4 Social stressors

With regard to social stressors listed on Axis IV, 31 children experienced problems at school. However, there was no significant difference in IQ between the children who experienced problems at school and those who did not. Fourteen of the children with school stressors on Axis IV had a learning disorder.

Sixteen children experienced peer relationship problems: in 8 children these problems included teasing and bullying. Sixteen children experienced their mothers as being overwhelmed. Thirteen children's parents were recorded as having marital conflict or were separated. Further psychosocial stressors listed on Axis IV by the consultant child psychiatrist were: absence of father (*N* = 13), poverty or financial difficulties (*N*=8), sibling rivalry (*N*= 8), multiple caregivers (*N*= 4), death of the child's mother (*N* = 5), high parental expectations (*N* = 5), abuse (physical and/or sexual, *N* = 14) and being orphaned (*N* = 2). Nine children experienced other stressors which included immigration, family relationship problems and problems with physical appearance.

## 6.3 Presenting complaints

Table 6.6 indicates the frequency and range of presenting problems with which children with anxiety disorders presented to the CAFU. The main complaints were: poor school performance (*N* = 34), aggression (*N* = 31), poor concentration (*N* = 28), being quiet and withdrawn (*N* = 21), anxiety (*N* = 13), problems separating from parents (*N* = 10), depression (*N* = 8), bedwetting (*N* = 5), irritability (*N*=3), insomnia (*N* = 2) and somatic complaints (*N* = 2). Twenty one children presented with other symptoms.

Eighteen children presented with hyperactivity of which seventeen had poor concentration as well. Only 1 child presented with hyperactivity but not poor concentration.

The mean IQ of the group who presented with aggression, was 84,1 (*SD* = 14,7) and the mean IQ of the group who did not present with aggression was 73,2 (*SD* = 18,3), p = 0.035. There was no significant difference between the ages of the group who presented with aggression and the group who did not, p > 0,05.

A significant IQ difference was noted between the group who presented with somatic complaints and the group who did not. The mean IQ of the group who presented with somatic complaints was 124,5 (*SD* = 6,5) and the mean IQ of the group who did not present with somatic complaints was 78,1 (*SD* = 15,2), p = 0.019. There was no significant difference between the ages of the two groups.

A significant age difference was found between the group who presented with depression as a main complaints and the group who did not. The mean age of the group who presented with depression was 12,2 (*SD* = 2,9) and the mean age of the group who was not depressed was 8,7 (*SD* = 2,1), p=0,008. No significant IQ difference was found between the two groups, p >0,05.

When other main complaints were compared with age and IQ, no significant difference was found, p>0,05.

**Table 6.6** Presenting complaints

| **Presenting complaint** | **Number of children** |
|---|---|
| Poor school performance | 34 |
| Aggression | 31 |
| Poor concentration | 28 |
| Quiet and withdrawn | 21 |
| Hyperactivity | 18 |
| Anxiety | 13 |
| Problems separating from parents | 10 |
| Depression | 8 |
| Bedwetting | 5 |
| School refusal | 4 |
| Irritability | 3 |
| Insomnia | 2 |
| Selective mutism | 2 |
| Somatic complaints | 2 |
| Sensitivity to criticism | 1 |

## 6.4 Subjective experience of the children

### 6.4.1 Child psychiatric interview

From Table 6.7 it can be seen that in the interview with the child done by a clinical psychologist, 40 children (80%) verbalised symptoms of anxiety or displayed signs of anxiety. Thirty children (60%) were described as lonely/ isolated. Interestingly, as many as 21 children (42%) were described as angry (either passive aggressive, oppositional or hostile) and 19 children (38%) had performance anxiety with regard to their scholastic ability. Sixteen children (32%) were reported to present with attachment difficulties and 16 children (32%) were described as depressed. Other themes which emerged in the child psychiatric interview were a low self-esteem ($N$ = 15, 30%), a strong wish for approval by others ($N$ = 15, 30%), poor concentration ($N$ = 13, 26%), a need for more emotional support/ unmet dependency needs ($N$ = 12, 24%), a persecutory worldview (the child views the world as unsafe, $N$ = 11, 22%), and a feeling that the expectations placed on him/ her are too much (the child feels overwhelmed and burdened, $N$ = 11, 22%).

Table 6.7 indicates the subjective experience described by the children on the child interview.

**Table 6.7** Subjective experiences of children as elicited by child psychiatric interview

| **Subjective experience** | **Number of children** |
|---|---|
| Anxiety | 40 |
| Feeling isolated/ lonely | 30 |
| Anger | 21 |
| Academic anxiety | 19 |
| Attachment difficulties | 16 |
| Depression | 16 |
| Feeling inadequate/ low self-esteem | 15 |
| Wishing for approval | 15 |
| Poor concentration | 13 |
| Unmet dependency needs | 12 |
| Feeling overwhelmed/ burdened | 11 |
| Persecutory worldview | 11 |

## 6.4.2 Draw-a-person-test (DAP)

The Draw-a-Person-Test (Machover, 1949) was undertaken together with a clinical interview and showed that 38 children felt inadequate or had a poor self-esteem.

Thirty four children wished for more approval by others, 31 children felt anxious and 26 children felt insecure. Twenty eight children had underlying anger, 23 children felt overwhelmed and 22 children experienced academic anxiety. Eighteen children experienced peer problems or struggled to connect with others (i.e. felt lonely or isolated). Fourteen children felt that they needed more emotional support (unmet dependency needs), 12 children viewed the world as a persecutory place, 9 children desired more mastery in their world and 7 children were depressed.

Table 6.8 indicates the subjective experiences described by the children on the Draw-a-Person Test and clinical interview.

**Table 6.8** Themes from the DAP and clinical interview

| **Themes from the DAP and clinical interview** | **Frequency of themes** |
|---|---|
| Feeling inadequate/ low self-esteem | 38 |
| Wishing for approval | 34 |
| Anxiety | 31 |
| Feeling insecure | 26 |
| Anger | 28 |
| Feeling overwhelmed/ burdened | 23 |
| Academic anxiety | 22 |
| Feeling isolated/lonely | 18 |
| Unmet dependency needs | 14 |
| Persecutory worldview | 12 |
| Desiring a sense of mastery | 9 |
| Depression | 7 |

## 6.4.3 Children's Apperception Test (CAT) and Thematic Apperception Test (TAT)

According to the CAT and the TAT, 39 children felt that they needed more emotional support (unmet dependency needs), 33 children viewed their father as distant, 30 had a persecutory worldview (viewed the world as a dangerous place), 29 viewed their mother as distant, 26 were anxious and 24 were angry. Nineteen children felt alone and isolated and 17 experienced anxiety regarding family conflict. Fourteen children felt insecure and 5 were emotionally guarded. Five children had a low self-esteem, 2 children felt misunderstood, 2 children felt depressed, one had academic anxiety and one desired a sense of mastery.

Table 6.9 shows the themes that emerged from the CAT and TAT protocols of the children's psychological assessments.

**Table 6.9** Themes from the CAT and TAT

| **Themes from the CAT and TAT** | **Frequency of themes** |
|---|---|
| Unmet dependency needs | 39 |
| Perception of father as distant | 33 |
| Persecutory worldview | 30 |
| Perception of mother as distant | 29 |
| Anxiety | 26 |
| Anger | 24 |
| Feeling isolated/ lonely | 19 |
| Anxiety regarding family conflict | 17 |
| Feeling insecure | 14 |
| Being guarded | 5 |
| Feeling inadequate/ low self-esteem | 5 |
| Depression | 2 |
| Feeling overwhelmed/ burdened | 2 |
| Feeling misunderstood | 2 |
| Academic anxiety | 1 |
| Desiring a sense of mastery | 1 |

## 6.4.4 Sentence Completion Test

Only 25 children completed the Sentence Completion Test (Brown & Unger, 1992). The main reason that was given for the test not being done was that the child was unable to write.

The Sentence Completion Test showed that 16 children experienced academic difficulties, 15 children had a low self-esteem, 15 children experienced their father as absent, 11 children experienced their mother as absent, 10 children felt overwhelmed and burdened, 8 children had a persecutory worldview and 7 children were angry or hostile .

Table 6.10 shows the main concerns of children as reflected in the Sentence Completion Test.

**Table 6.10** Responses from the Sentence Completion Test

| **Responses from Sentence completion test** | **Frequency of responses** |
|---|---|
| Academic anxiety | 16 |
| Perceives father as distant | 15 |
| Poor self-esteem/ feels inadequate | 15 |
| Perceives mother as distant | 11 |
| Feels overwhelmed/ burdened | 10 |
| Persecutory worldview | 8 |
| Angry/hostile | 7 |

## 6.4.5 Summary of subjective experiences

Table 6.11 illustrates the combined subjective experiences from all the results of the children's psychological assessments.

**Table 6.11** Subjective experiences of children with anxiety disorders

| **Subjective experience combined** | **Frequency of responses** |
|---|---|
| Anxiety | 45 |
| Unmet dependency needs | 42 |
| Feeling isolated/lonely | 41 |
| Feeling inadequate/ low self-esteem | 41 |
| Anger | 38 |
| Perception of father as distant | 37 |
| Wishing for more approval by others | 36 |
| Academic anxiety | 35 |
| Persecutory worldview | 35 |
| Perception of mother as distant | 33 |
| Feeling overwhelmed/ burdened | 30 |
| Feeling insecure | 27 |
| Depression | 21 |
| Attachment difficulties | 17 |
| Anxiety regarding family conflict | 17 |
| Concentration problems | 13 |
| Desires sense of mastery | 10 |

When the subjective experiences of each child were combined from the child psychiatric interview, self-report test and projective tests the results were as follows: 45 children were anxious, 42 needed more emotional support (unmet dependency needs), 41 felt isolated and alone, 41 felt inadequate/had a poor self-esteem and 38 children were angry. Thirty seven children perceived their fathers as distant, 36 wished for more approval from others, 35 children had academic anxiety and 35 children had a persecutory worldview. Thirty three children perceived their mothers as distant, 30 children were overwhelmed and burdened, 27 were insecure and 21 depressed. Seventeen children had attachment difficulties and 17 had anxiety regarding family conflict. Thirteen had concentration problems and 10 children desired more mastery in their world.

When the age and IQ of the group who experienced subjective feelings of anger was compared with the group who did not experience anger, no significant difference was found, $p > 0,05$.

The group which experienced a persecutory worldview was younger than the group which did not. The mean age of the group with a persecutory worldview was 8,7 (*SD* = 2,2) and the mean age of the group without a persecutory worldview was 10,6 (*SD* = 2,7), $p = 0,02$. With regards to IQ, no significant difference was found between the two groups, $p > 0,05$.

Only the subjective experience of having a persecutory worldview was associated with age.

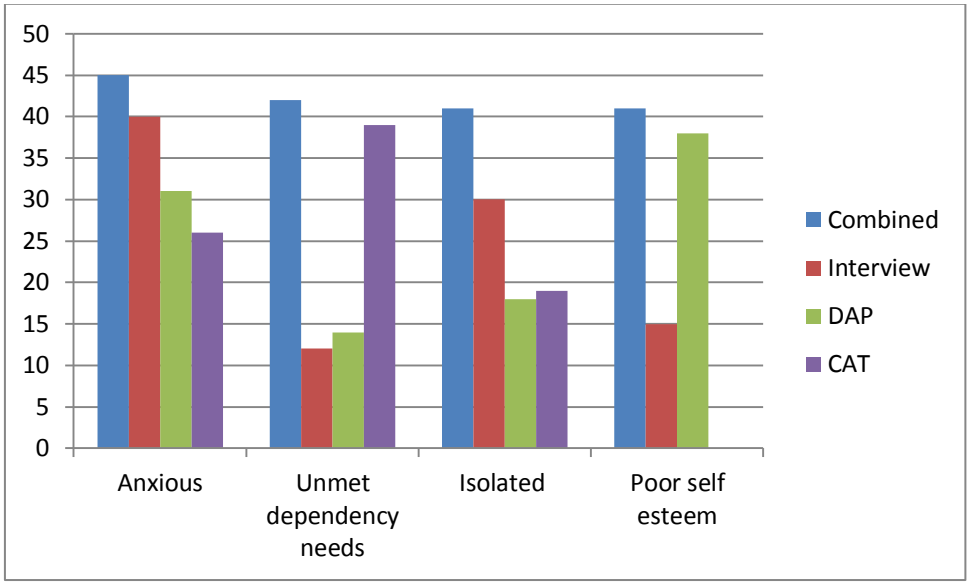
Table 6.12 lists the most commonly elicited of the subjective experiences of the children in the study and compares it with the tests in which it was elicited.

**Table 6.12** Subjective experiences and the frequency of responses in individual tests

| | Combined | Interview | DAP | CAT | Sentence completion |
|---|---|---|---|---|---|
| Anxiety | 45 | 40 | 31 | 26 | 0 |
| Unmet dependency needs | 42 | 12 | 14 | 39 | 0 |
| Feels isolated | 41 | 30 | 18 | 19 | 0 |
| Poor self-esteem | 41 | 15 | 38 | 0 | 15 |
| Anger | 38 | 21 | 25 | 23 | 7 |
| Father distant | 37 | 0 | 0 | 33 | 15 |
| Wishes for approval | 36 | 15 | 34 | 0 | 0 |
| Academic anxiety | 35 | 19 | 22 | 0 | 16 |
| Persecutory word view | 35 | 11 | 12 | 30 | 8 |

Figure 6.1 shows four of the most common subjective experiences (anxiety, unmet dependency needs, being isolated/ lonely and a poor self-esteem) and compares the total number of subjects in which it occurred with how often it occurred in the separate tests.

**Figure 6.1**: Subjective experiences elicited by individual tests



# 7.0 DISCUSSION

## 7.1 Demographic profile

### 7.1.1 Mean age

The children and adolescents in the study presented to the unit at a mean age of 9.3 years. The age of onset of anxiety disorders in the National Comorbidity Replication Adolescent Supplement was 6 years (McGorry *et al*., 2011). However, most epidemiological studies look at age of onset, not age of referral as explored in this study. According to Kessler *et al*. (2012), social and specific phobias typically emerge during childhood whereas GAD and panic disorder emerge during adolescence and adulthood. In this study, the most common diagnosis was GAD (n=29) and only four children had social anxiety disorder which may explain the older age of participants in this study.

With regard to the mean age for individual disorders, children with separation anxiety disorder presented to the CAFU at a mean age of 8.9 years. In the National Comorbidity Survey Replication study, the median age of onset of separation anxiety disorder was seven years (this study looked at the median, not the mean). However, the age at presentation to the CAFU of the other anxiety disorders was much lower than the median age of onset in the National

Comorbidity Survey Replication study (Kessler *et al*., 2005). The median age of onset in the National Comorbidity Survey Replication for social anxiety disorder was 13 years; compared to a mean of 10.2 at the CAFU. The average age with which children with GAD presented to the CAFU was 9.2 years, in the National Comorbidity Survey Replication study, the age of onset of GAD was older than 13 years (Kessler *et al*., 2005).

These differences may be explained by the fact that the National Comorbidity Survey Replication study looked at age of onset in a community sample; this study looked at age of presentation to the unit in a clinical sample. This could contribute to the younger presentation as a clinical sample implies comorbidity, family problems and school problems resulting in an earlier manifestation of problems. Another explanation could be that the anxiety disorder NOS group included diagnoses such as specific phobias and separation anxiety disorder which emerge at a much younger age (Kessler *et al*., 2005; Kessler *et al*., 2012). Alternatively, it could be that the pathology was more severe due to the severe psychosocial stressors and co-morbid presentations that the children in this study were exposed to (e.g. family pathology and low IQ) and therefore impairment manifested earlier. Finally, the National Comorbidity Survey Replication study was done on American adolescents – anxiety disorders may present differently in South African children due to local differences in levels of stress, crime and violence as well as possible cultural and ethnic differences (Muris *et al*., 2006).

## 7.1.2 Level of education

The median level of education (Grade 3) is appropriate for the average age of the children (9 years) as in South Africa children usually start with grade 1 in the year that they turn 7 years. However, with the low average IQ of the participants, one would expect the median level of education to be lower. An explanation for this may be that most of the children in the study have only been in school for a few years and the low IQ or learning difficulties have not yet been identified by the education system since. If one looks at the stressors on Axis IV, most of the children experienced school difficulties.

Additionally, not being in the correct grade for one's mental age is a significant stressor for children with a low IQ and the unrealistic expectations placed on these children may have contributed to the development of an anxiety disorder. It is regrettable that the children in this study presented with an anxiety disorder before their learning difficulties or low IQ's were identified. Earlier identification of these challenges could have given the children access to remedial classes or special schooling, which, if initiated early, might have resulted in a more positive prognosis from an academic and developmental perspective. It may also have prevented the burden of unattainable expectations and, consequently, could have prevented the development of an anxiety disorder in many of the children. Based on these findings, it is apparent that formalised assessments of all school children could identify children with learning difficulties or special education needs and effect earlier intervention.

However, even if these children were identified earlier, they might not have had the opportunity to be placed in remedial classes or special education schools. South Africa has a policy of inclusive education which means that schools have to provide quality education to all children regardless of ability/ disability (Department of education, 2001; Ngcobo & Mutukrishna, 2011). This means that mainstream schools have to accommodate children with learning disorders and cognitive impairment and that they are not taught in separate, specialised schools/ classes. The implementation of this policy has resulted in several challenges. These include undertrained teachers, longer classes and lack of support from allied professionals such as speech therapists and occupational therapists. Often the required remedial support is not available for special needs learners who then do not cope in mainstream classes. Many teachers report that they feel unprepared and unsupported (Eloff, Swart & Engelbrecht, 2002; Hay, Smith & Paulsen, 2001), there is poor funding of the inclusion policy (Wildeman & Nomdo, 2007) and many teachers have a negative attitude towards "differently able" students (Ngcobo & Mutukrishna, 2011).

Children with learning disorders or cognitive impairment who do not receive the support that they require in a mainstream school, often feel overwhelmed, unsupported and anxious. This could potentially worsen an existing anxiety disorder or, indeed, precipitate anxiety disorders in vulnerable children. The possible association between having a low IQ or a learning disorder, feeling overwhelmed and the eventual development of anxiety should be explored in future research, as such an association could be a strong argument for IQ

assessments in schools and the provision of specialised education for children who need it.

### 7.1.3 Marital status of caregivers

Only 15 out of 50 children (30%) came from intact nuclear families and had parents who were married. The remaining children's parents were separated, divorced or deceased. This is consistent with the study by Vincente, Saldivia, De la Barra, Kohn, Pihan and Valdivia (2012) where child and adolescent mental disorders were correlated with poor family functioning, family psychopathology, and children not living with both parents. It seems reasonable to consider that when there is marital conflict, parental absence or family dysfunction children would feel insecure and anxious and that their parents would not be able to provide them with optimal care, support and reassurance under such circumstances. Vincente, Saldivia, De la Barra, Kohn, Pihan and Valdivia (2012, p. 1030) noted that, "perception of poorer family function was significantly associated with each of the categories of mental disorders". In addition, research has indicated that parental separation and negative events in the preceding twelve months significantly predicted a mood disorder in children (Kessler, Davis & Kendler, 1997; Williams *et al.*, 2007).

### 7.1.4 Employment

The study done by Vincente, Saldivia, De la Barra, Kohn, Pihan & Valdivia (2012) showed an inverse relationship between family income and anxiety disorders. The current study did not look at the financial status of families. However, it is significant that thirteen children (26%) had parents who were unemployed which implies a lack of income and financial stress. Thirty six of the children had at least one parent who was employed. Eight children had poverty listed as a stressor in their Axis IV diagnosis by a registered child psychiatrist. Poverty or a limited income can prevent families from being able to obtain remedial lessons, access to extra murals and resources which could buffer children from anxiety symptoms. It could also result in high levels of anxiety or tension in the home which may impact on the child's anxiety.

## 7.2 Comorbidity

The number of patients who presented with anxiety disorder NOS and GAD was very high, especially when it is noted that GAD usually presents much later in life (Kessler *et al.*, 2005; McGorry *et al.*, 2011; Merikangas *et al.*, 2010). The most common disorder comorbid to an anxiety disorder on Axis I is another anxiety disorder (Martin *et al.*, 2007; Spence, 1998). In this study, however, only four children had comorbidity between anxiety disorders i.e. GAD with separation anxiety disorder, social anxiety disorder with separation anxiety disorder and GAD

with social anxiety disorder. One possible explanation could be that children were given the diagnosis of anxiety disorder NOS when they met the criteria for more than one diagnosis.

ADHD and depression were two of the most common comorbid diagnoses on Axis I which is consistent with current literature. However, an interesting but expected finding was the high comorbidity with learning disorders and attachment difficulties.

Learning disorders are often not identified nor treated with special remedial education, as explained in section 7.1.2. Children with these disorders have high expectations placed on them and can feel burdened and become anxious. This could explain the high comorbidity with anxiety disorders. There was also a high comorbidity between ADHD and learning disorders. Children with ADHD are often at risk for learning disorders and either, or both, of these conditions could result in performance anxiety, high expectations and a low self-esteem.

There are two possible explanations for the high frequency of attachment problems in this sample. One explanation is that the attachment problems are not related to the diagnosis of an anxiety disorder as such but rather that they are a result of the low income of the families and the absence of one or both parents in many children. Diener, Casady and Wright (2003) found that children from disrupted families compounded by poverty often have insecure attachment. A

second explanation is that the insecure attachment is an aetiological factor in the development of anxiety symptoms (Brumario & Kerns, 2010).

Only one child had conduct disorder even though many had aggression and irritability. This suggests that the clinicians treating the patients did not merely diagnose a behavioural disorder based on these symptoms but looked for an underlying cause for the symptoms.

The cognitive abilities of the children in this study as assessed by their IQ scores were significantly low, i.e. M= 79.9 when compared with the norm of 100. More than half of the children in this study had either an IQ in the borderline range of intellectual function (70-79) or mild mental retardation, i.e. an IQ score between 50 and 69 according to the DSM IV-TR classification. Given that limited cognitive abilities result in poorer coping resources, this adds to the emotional burden of such children.

Eighteen of the children reviewed had a medical condition. These included neurological, respiratory and cardiac conditions, visual problems and HIV. It is noted that each of these may have contributed to significant impairment including poor school performance. A study done in South India showed that many children, who presented with learning disorders, actually had impaired vision or chronic medical conditions (Mogasale, Patil, Patil & Mogasale, 2012).

The most prominent finding on the DSM-IV Axis IV evaluation was the high number of children who presented with school stressors and parental disinterest or neglect. The many school problems can be explained by the large number of children who had a low IQ or learning disorders. Twenty children (40%) had parents who neglected them and 16 children (32%) had parents who were reported to be punitive and harsh. It is important to note that of these children five were described as having both neglectful parenting as well as discipline that was harsh and punitive compared with their peers. Gray, Carter and Silverman (2010) stated that high perceived parental acceptance was related to children reporting low levels of social anxiety symptoms. Conceivably, these unsupportive or negative parental attitudes may have contributed to increased anxiety levels in the children.

Sixteen children (32%) experienced teasing and bullying which could have contributed to a feeling of loneliness and social anxiety (Storch *et al.*, 2003).

## 7.3 Presenting complaint

Only 13 of the 50 children diagnosed with anxiety disorders, actually presented with anxiety as the main stated complaint. This demonstrates the importance of always investigating the child's subjective experience of their difficulties and screening for anxiety in children with issues such as poor school performance, poor concentration and aggression. In the present record review, the most

common presenting problems in the children with anxiety disorders were related to school performance and behavioural problems. This illustrates that aggressive behaviour and behavioural difficulties in children can often mask anxiety. Finally it is apparent from this study that anxiety can be related to poor school performance, unrealistic parental expectations, peer rejection and low self-esteem. These findings suggest that child psychiatry consultations need to be mindful of the broader scope of presentation that anxiety can have in children.

Surprisingly, only two children presented with somatic complaints. Neither of these children had medical conditions diagnosed on the DSM Axis III. Based on the literature, more children were expected to present in this way (Beidel *et al.*, 1991; Hinton *et al.*, 2009). The low number of children presenting with somatic complaints in comparison to international literature could demonstrate a difference in the way anxiety presents in different cultures (Hinton *et al.*, 2009). An alternative explanation is that children with somatic complaints more commonly present to medical clinics and are not referred to child psychiatry.

The children who presented with somatic complaints had a higher IQ compared with those who did not. This interesting finding could possibly be explained by Muris, Mayer, Freher, Duncan and Van den Hout (2010) who demonstrated that children with better cognitive development had a better ability to perceive physical symptoms as a signal of anxiety.

The children who presented with aggressive behaviour demonstrated a higher performance on their intelligence tests than the children who did not present with aggression. This is an interesting finding contrary to expectations, as aggression could be expected to correlate with a lower IQ and therefore less coping skills as well as a lower frustration tolerance (Fergusson, Horwood & Ridder, 2005; Martin *et al.*, 2007). Further research is necessary to explore this finding in more depth.

The children who presented with depression were older than those who did not (M= 12,2 years and 8,7 years respectively). This is in keeping with Sterba, Prinstein and Cox' observation (2007) that children are more likely to self-report depressive symptoms during their transition to adolescence. The cognitive processes necessary to develop depression mature during middle childhood (Sterba *et al.*, 2007) but may not predispose to depressive illness until adolescence is reached (Cole *et al*, 1998). Alternatively, older children may be more able to articulate their depressed mood compared with younger children.

Five children were diagnosed with an anxiety disorder but the symptom of anxiety was not elicited in the subjective tests. One of these children presented with anxiety as the main presenting complaint. The question arises how the diagnosis of an anxiety disorder was made in the other four children. Other aspects of the diagnostic process were not described in this study and the experience of anxiety could have emerged in those aspects of the assessment. The child psychiatrist is also more experienced at eliciting anxiety and sees the child at the fourth visit to the clinic when children may be less guarded.

## 7.4 Subjective experience

Most of the anxiety symptoms were elicited by the direct interviews and projective tests undertaken with children themselves and not the presenting complaints given by caregivers. This is consistent with the literature which has shown that children can give a better account of their own anxiety than their parents or teachers can (March *et al.*, 1997; Weitkamp *et al.*, 2010). It also illustrates that it is crucial to screen for anxiety in children who present with other complaints.

Of the direct interventions reviewed to elicit the child's subjective experiences, the child psychiatric interview (Holford & Smith, 1992) appeared to be the most reliable and efficient way to elicit anxiety experiences in children. The clinical interview elicited anxiety symptoms in 40 of the 45 children who experienced a subjective sense of anxiety. The reason for the large number of anxiety symptoms gleaned from the clinical interview could be the fact that the clinical psychologist doing the interview spends more time with the child individually than the clinician doing the initial intake interview. Another reason could be that the child interview is designed to be non-threatening and the aim is to establish a good rapport in order to facilitate emotional expression and discussion of fears and vulnerabilities (Holford & Smith, 1992). It is also noted that the clinical interview occurs at the time of the child's second visit to the clinic and he/she may be less guarded at this stage.

Chorpita *et al*. (2000) stated that a lack of gold standard has served as an obstacle for the identification of anxiety disorders in children. However, this study shows that an effective way to assess anxiety is through a direct interview with the child: i.e. to talk to and spend time with the child.

The subjective experiences of a low self-esteem, loneliness and depression in children with anxiety disorders, has been described by several authors (Asher *et al*., 1984; Leary *et al*., 1995; Snyder *et al*., 2009; Storch *et al*., 2003). In addition, a high number of children experienced anger as part of their anxiety response. It is notable that irritability is a common emotion in children with anxiety disorders (Stringaris, 2011).

In the present study many children perceived their mother or father figures as emotionally or physically distant. Vincente, Saldivia, De la Barra, Kohn, Pihan and Valdivia (2012) showed that anxiety disorders in children were associated with children not living with both parents. Gray *et al*. (2010) demonstrated that children who experience their parents as accepting had less anxiety than those children who perceived their parents as rejecting. It is also feasible that anxious children require more involvement, support and reassurance and therefore subjectively feel emotional distance more acutely.

Two surprising findings, not described in the literature, were, firstly, the persecutory worldview held by children with anxiety and the secondly the experience of feeling burdened and overwhelmed. It is possible that the very fact

that certain children have raised levels of anxiety is likely to lead them to perceive their environments as more threatening and scary than their less anxious peers. Equally, children who perceive their worlds as more threatening and frightening are likely to feel more burdened than their less anxious peers. Given that many anxious children perceive their environment as threatening and/or frightening, it is conceivable that some would respond with hostility or aggression. In addition, it is possible that these subjective experiences are more easily elicited on direct interview.

Another surprising finding is that the children with a persecutory worldview were significantly younger. Muris, Mayer, Freher, Duncan and Van den Hout (2010) believed that younger children are often less able to make internal attributions when they experience certain symptoms. The external attributions that these younger children make, could lead to a persecutory worldview.

# 8.0 RECOMMENDATIONS

A recommendation for future research would be to do a similar study with a larger sample in order to investigate correlations between variables. An interesting finding was the fact that children who presented with aggression had a higher IQ than the group who was not aggressive. This finding may be the function of a specific sample with a particular referral catchment area and should be explored in future by comparing IQ and aggression in a larger sample of anxious children. Any IQ or age associations for somatic complaints, depression and a persecutory worldview should also be explored using more subjects.

An alternative consideration would be for the group of children with anxiety disorders to be compared to a control group without anxiety disorders as this will demonstrate how specific many of these main complaints and subjective experiences are to children with an anxiety disorder diagnosis. Finally, research should also be done on a group of children diagnosed with an anxiety disorder only, as this will prevent the confounding effect of comorbid diagnoses on the findings.

Although the full scale IQ of the children in this study was noted and compared with certain main complaints and subjective experiences, no distinction was made between verbal and non-verbal IQ. This could possibly explain certain findings, such as the IQ difference between the aggressive and non-aggressive group, and should be explored further. A possible association between the inclusion of

children with learning disorders and cognitive impairment in mainstream schools, and the development of anxiety disorders in these children should be explored, as such findings could influence education policy.

It is also apparent that further self-report tests need to be developed based on clinical interviews and projective tests. These would not merely be downward modifications of adult scales but would reflect the child's actual subjective experiences.

However, as argued in the literature review, children might not always have the ability to express themselves verbally and self-report tests are not necessarily the best way to elicit subjective experiences. There has been a strong emphasis on self-report scales in the literature as these scales give numerical values and are practical in the research setting. However, the value of the clinical interview remains undernoted. In this study where self-report scales were not used, the clinical interview proved to be the most effective way to elicit subjective experiences and further research on the interview is therefore recommended.

# 9.0 LIMITATIONS

A limitation of the study was that as a retrospective record review the study is purely descriptive in nature. As a result no causal inferences can be made and these are to be the subject of future research and alternative research study designs (Worster & Haines, 2004). One possibility, for example, in the children with an anxiety disorder and poor school performance is to investigate whether the poor school performance caused the anxiety or whether anxiety contributed to poor school performance. Further value could be obtained if these children with anxiety disorders were compared to a group of children without anxiety disorders. Finally, it is noted that the sample size in this record review was small, limiting generalisations to such children overall.

The use of projective tests is controversial and the validity of these tests is disputed in positivistic research (Flanagan & Di Guiseppe, 1999). However, it is important to note that projective tests in this study were done together with an interview of the child and were used as a way to elicit symptoms in a non-threatening way. The use of projective tests in facilitating children's emotional expression appears to be of clinical value in this instance.

The presenting complaints and subjective experiences elicited in the study were not specific to anxiety disorders, per se. These symptoms could have been caused by either the co-morbid diagnoses or by the psychosocial stressors that these

children were experiencing. A prospective study design would be required to elucidate the causal contributions of each of these factors.

On the other hand, anxiety disorders in children with this cultural and racial profile have not previously been studied. Muris *et al*. (2006) looked at anxiety disorders in children in the Western Cape in South Africa but the racial and language profile were different to present study population. A study which examined anxiety in adolescents in Bloemfontein (Strydom, Pretorius & Joubert, 2012) selected participants from Afrikaans and English medium schools only and is therefore not representative of this study population.

To our knowledge, this is the first descriptive study of the subjective experience of children with anxiety disorders that did not look at symptoms that were predetermined on a self-report scale or a set of diagnostic criteria. It is suggested that by talking directly to the child one elicits a good description of children's own experience of anxiety disorders: their demographic profile, presenting complaints, subjective experiences and comorbidity.

# 10.0 CONCLUSIONS

Most children with anxiety disorders did not present with anxiety as a main complaint.

Anxiety was most often elicited by doing a direct interview with the child.

Children with anxiety disorders experienced many subjective experiences other than anxiety, for example low self-esteem, loneliness, irritability and a persecutory worldview.

Health professionals working with children would be well advised to consider interviewing children directly when screening for anxiety symptoms and to explore other symptoms such as irritability, loneliness and poor self-esteem as possible associated anxiety features.

# ADDENDUM A

## Data Collection Sheet

1. Demographic data:

    1.1. Age

    1.2. Level of education of the child

    1.3. Marital status of parents

    1.4. Employment of parents

    1.5. Language

    1.6. Gender

2. Multiple axial diagnosis:

    I

    II

    III

    IV

    V

3. Main complaint (parent/teacher):

4. Subjective Experiences:

   a) Child Psychiatry Interview
      Main themes:

   b) Incomplete sentences
      Main themes:

c) Projective tests
DAP and clinical interview
Main themes:

Child Apperception Test
Main themes:

# ADDENDUM B

Ethics certificate

**UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG**

Division of the Deputy Registrar (Research)

**HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)**
R14/49 Dr E Groenewald

| | |
|---|---|
| **CLEARANCE CERTIFICATE** | **M091114** |
| **PROJECT** | The Subjective Experience of Children with Anxiety Disorders: A Record Review |
| **INVESTIGATORS** | Dr E Groenewald. |
| **DEPARTMENT** | Department of Neurosciences |
| **DATE CONSIDERED** | 2009/11/27 |
| **DECISION OF THE COMMITTEE*** | Approved unconditionally |

**Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.**

**DATE** 2009/11/20 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Prof C Smith

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**DECLARATION OF INVESTIGATOR(S)**

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...

# REFERENCES


Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.

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

Anderson, J.C., Williams, S., & McGee, R. (1987). DSM-III disorders in preadolescent children: Prevalence in a large sample from the general population. *Archives of General Psychiatry, 44* (1), 69-76.

Andrews, G., Hobbs, M. J., Borkovec, T.D., Beesdo, K., Craske, M.G. & Heimberg, R.G., et al. (2010). Generalised worry disorder: A review of DSM-IV generalised anxiety disorder and options for DSM-V. *Depression and anxiety, 27,* 134-147.

Angold, A., Costello, E.J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry, 40* (1), 57-87.

Asher, S.R., Hymel, S., & Renshaw, P.D. (1984). Loneliness in children. *Child Development, 55* (4), 1456-1464.

Bar-Haim, Y., Dan, O., Eshel, Y., & Sagi-Schwarz, A. (2007). Predicting children's anxiety from early attachment relationships. *Journal of Anxiety Disorders, 21,* 1061-1068.

Bastiaansen, D., Koot, H. & Ferdinand, R. (2004). Quality of life in children with psychiatric disorders: self-, parent and clinician report. *Journal of the American Academy of Child and Adolescent Psychiatry, 43* (2), 221-230.

Beesdo, K., Knappe, S. & Pine, D.S. (2009). Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. *Psychiatric Clinics of North America, 32* (3), 483-524.

Beidel, D.C., Christ, M.A.G. & Long, P.J. (1991). Somatic complaints in anxious children. *Journal of Abnormal Child Psychology, 19* (6), 659-670.

Bellak, L. & Bellak, S. (1998). *Children's apperception test, ninth revised edition.* Larchmont, NY, C.P.S., Inc.

Bell-Dolan, D.J., Last, C.G. & Strauss, C.C. (1990). Symptoms of anxiety disorders in normal children. *Journal of the American Academy of Child and Adolescent Psychiatry, 29* (5), 759-765.

Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L. & Kaufman, J., *et al*. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale

construction and psychometric characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry, 36* (4), 545-553.

Brotman, M. A., Rich, B. A. & Schmajuk, M. (2007). Attention bias to threat faces in children with bipolar disorder and comorbid lifetime anxiety disorders. *Biological Psychiatry, 61*,(6), 819-821.

Brown, L.H. & Unger, A.M. (1992). *Sentence Completion Series (SCS)*. Odessa, F.L. Psychological Assessment Resources.

Brumariu, L.E. & Kerns, K.A. (2010). Mother-child attachment patterns and different types of anxiety symptoms: is there specificity of relations? *Clinical Psychology Review, 29* (7), 658-669.

Bubier, J.L. & Drabick, D.A. (2009). Co-occurring anxiety and disruptive behavior disorders: The roles of anxious symptoms, reactive aggression, and shared risk processes. *Clinical Psychology Review*, 29 (7), 658-669.

Chorpita, B.F., Yim, L., Moffitt, C., Umemoto, L.A. & Francis, S.E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale*. Behaviour Research and Therapy, 38*, 835-855.

Cole, D.A., Peeke, L.G., Martin, J.M., Truglio, R. & Seroczynski, A.D. (1998) A longitudinal look at the relation between depression and anxiety in children and adolescents. *Journal of Consulting and Clinical Psychology, 66* (3), 451-460.

Connolly, S.D., Suarez, L & Sylvester, C. (2011). Assessment and treatment of anxiety disorders in children and adolescents. *Current Psychiatry Reports, 13,* 99-110.

Costello, E.J., Egger, H. & Angold, A. (2005a). 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden*. Journal of the American Academy of Child and Adolescent Psychiatry, 44 (*10), 972-983.

Costello, E.J., Egger, H. & Angold, A. (2005b). The developmental epidemiology of anxiety disorders: phenomenology, prevalence, and comorbidity. *Child and Adolescent Psychiatric Clinics of North America, 14,* 631-648.

Costello, E.J., Mustillo, S. & Erkanli, A., Keeler, G. & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry, 60* (8), 837-44.

Cramer, V., Torgersen, S. & Kringlen, E. (2005). Quality of life and anxiety disorders: A population study. *Journal of Nervous and Mental Disease, 193* (3), 196-202.

Deas-Nesmith, D., Brady, K.T. & Campbell, S. (1998). Comorbid substance use and anxiety disorders in adolescents*. Journal of Psychopathology and Behavioral Assessment, 20* (2), 139-148.

Department of Education. (2001). *Education white paper 6: Special needs education: Building an inclusive education and training system*. Pretoria: Department of Education.

Diener, M.L., Casady, MA. & Wright, C. (2003). Attachment security among mothers and their young children living in poverty: Associations with maternal, child, and contextual characteristics. *Merrill-Palmer Quarterly, 49* (2), 154-182.

Egger, H.L. & Angold, A. (2006). Common emotional and behavioral disorders in preschool children: presentation, nosology, and epidemiology*. Journal of Child Psychology and Psychiatry, 47*, (3/4), 313-337.

Eloff, I., Swart, E. & Engelbrecht, P. (2002). Including a learner with physical disabilities: stressful for teachers? *Koers, 67*, 77-99.

Fergusson, D.M., Horwood, J. & Lynskey, M.T. (1993). Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds*. Journal of the American Academy of Child and Adolescent Psychiatry, 32* (6), 1127-1134.

Fergusson, D.M, Horwood, L.J. & Ridder, E.M. (2005). Show me the child at seven II: childhood intelligence and later outcomes in adolescence and young adulthood. *Journal of Child Psychology and Psychiatry, 46* (8), 850-858.

Fichter, M.M., Kohlboeck, G., Quadflieg, N., Wyschkon, A., & Esser, G. (2009). From childhood to adult age: 18-year longitudinal results and prediction of the course of mental disorders in the community. *Social Psychiatry and Psychiatric Epidemiology, 44* (9), 792-803.

Flanagan, R. & Di Guiseppe, R. (1999). Critical review of the TEMAS: a step within the development of thematic apperception instruments*. Psychology in the Schools, 36* (1), 21-30.

Goldston, D.B., Daniel, S.S. & Erkanli, A. (2009). Psychiatric diagnoses as contemporaneous risk factors for suicide attempts among adolescents and young adults: developmental changes. *Journal of Consulting and Clinical Psychology, 77* (2), 281-290.

Gray, C.M.K., Carter, R. & Silverman, W.K. (2010). Anxiety symptoms in African American children: Relations with ethnic pride, anxiety sensitivity, and parenting*. Journal of Child and Family Studies, 20*, 205-213.

Hay, J.F., Smith, J. & Paulsen, M. (2001). Teacher preparedness for inclusive education. *South African Journal of Education, 21*, 213-210.

Herman, A.A., Stein, D.J., Seedat, S., Heeringa, S.G., Moomal, H. & Williams, D.R. (2009). The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders. *South African Medical Journal, 99* (5), 339-344.

Hinton, D.E., Park, L., Hsia, C., Hofmann, S. & Pollack, M.H. (2009). Anxiety disorder presentations in Asian populations: A review. *CNS Neuroscience & Therapeutics, 15*, 295-303.

Holford, L.E. & Smith, C. (1992). Child Psychiatric Interview. *Southern African Journal of Child and Adolescent Mental Health, 14*, 47-53.

Ishikawa, S., Oota, R. & Sakano, Y. (2003). The relationship between anxiety disorders tendencies and subjective school maladjustment in childhood. *Japanese Journal of Counseling Science, 36* (3), 264-271.

Kashani, J.H. & Ovaschel, H. (1990). A community study of anxiety in children and adolescents. *American Journal of Psychiatry, 147*, 313-318.

Keller, M.B., Lavori, P.W., Wunder, J., Beardslee, W.R., Schwarz, C.J. & Roth, J. (1992). Chronic course of anxiety disorders in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 31* (4), 595-599.

Kendall, P.C. (1994). Treating anxiety disorders in children: results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 62* (1), 100-110.

Kessler, R.C., Berglund, P., Demler, O., Jin, R. & Walters, E.E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593-602 .

Kessler, R.C., Avenevoli, S., Costello, J., Georgiades, K., Green, J.G. & Gruber, M.J., *et al*. (2012). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69* (4), 372-380.

Kessler, R.C., Davis, C.G. & Kendler, K.S. (1997). Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. *Psychological Medicine, 27* (5), 1101-1119.

Leary, M.R., Schreinhover, L.S. & Haupt, A.L. (1995). The role of low self-esteem in emotional and behavioral problems: why is low self-esteem dysfunctional? *Journal of Social and Clinical Psychology, 14* (3), 297-314.

Lewinsohn, P.M, Gotlib, I.H. & Seeley, J.R. (1995). Adolescent psychopathology: IV. Specificity of psychosocial risk factors for depression and substance abuse in

older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34* (9), 1221-1229.

Lewinsohn, P.M, Zinbarg, R., Seeley, J.R. , Lewinsohn, M. & Sack, W.H. (1997). Lifetime comorbidity among anxiety disorders and between anxiety disorders and other mental disorders in adolescents. *Journal of Anxiety Disorders, 11* (4), 377-394.

Machover, K. (1949). Personality projection: in the drawing of a human figure. Springfield, IL: Charles C Thomas Publisher.

Main, M. (1996). Introduction to the special section on attachment and psychopathology: 2. Overview of the field of attachment. *Journal of Consulting and Clinical Psychology, 64* (2), 237-243.

March, J.S., Parker, J.D.A., Sullivan, K., Stallings, P. & Conners, K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability and validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 36* (4), 554-565.

Martin, L.T., Kubzansky, L.D., LeWinn, K.Z., Lipsitt, L.P., Satz, P. & Buka, S.L. (2007). Childhood cognitive performance and risk of generalized anxiety disorder. *International Journal of Epidemiology, 36*, 769-775.

McGee, R., Feeham, M. & Williams, S. (1992). DSM III disorders from age 11 to age 15 years*. Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 50 – 59.

McGorry, P., Purcell, R., Goldstone, S. & Amminger, G. P. (2011). Age of onset and timing of treatment for mental and substance use disorders: implications for preventive intervention strategies and models of care. *Current Opinion in Psychiatry, 24*, 301-306.

Merikangas, K.R., He, J., Burstein, M., Swanson, S.A., Avenevoli, S. & Cui, L., *et al*. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: results from the National Comorbidity Survey Replication – Adolescent Supplement (NCS - A*). Journal of the American Academy of Child and Adolescent Psychiatry, 49* (10), 980-989.

Mogasale, V.V., Patil, V.D., Patil, N.M. & Mogasale, V. (2011). Prevalence of specific learning disabilities among primary school children in a South Indian city. *Indian Journal of Pediatrics*, 79(3), 342-347.

Muris, P., Loxton, H., Neumann, A., Du Plessis, M., King, N. & Ollendick, T. (2006). DSM-defined anxiety disorders symptoms in South African youths: Their assessment and relationship with perceived parental rearing behaviours*. Behaviour Research and Therapy, 44* (6), 883-96.

Muris, P., Mayer, B., Freher, N.K., Duncan. S. & Van den Hout, A. (2010). Children's internal attributions of anxiety-related physical symptoms: Age-related patterns and the role of cognitive development and anxiety sensitivity. *Child Psychiatry and Hum Development, 41*, 535-548.

Muris, P., Mayer, B. & Shubert, T. (2010). "You Might Belong in Gryffindor": Children's courage and its relationships to anxiety symptoms, big five personality traits, and sex roles. *Child Psychiatry and Human Development, 41*, 204-213.

Muris, P., Merckelbach, H., Schmidt, H. & Tierney, S. (1999). Disgust sensitivity, trait anxiety and anxiety disorders symptoms in normal children. *Behaviour Research and Therapy, 37*, 953-961.

Muris, P., Steerneman, P. & Merckelbach, H. (1998). Comorbid anxiety symptoms in children with pervasive developmental disorders. *Journal of Anxiety Disorders, 12* (4), 387-393.

Muris, P., Van Brakel, A.M.L., Arntz, A. & Schouten, E. (2011). Behavioral inhibition as a risk factor for the development of childhood anxiety disorders: A longitudinal study. *Journal of Child and Family Studies, 20*, 157-170.

Murray, H.A. & Morgan, C. (1935). A method for investigating fantasies: The Thematic Apperception Test. *Archives of Neurology and Psychiatry, 34,* 289-306.

Myer, L., Stein, D.J., Grimsrud, A., Seedat, S. & Williams, D.R. (2008). Social determinants of psychological distress in a nationally-representative sample of South African adults. *Social Science & Medicine, 66* (8), 1828-1840.

Myer, L., Stein, D.J., Jackson, P.B., Herman, A.A., Seedat, S. & Williams, D.R. (2009). Impact of common mental disorders during childhood and adolescence on secondary school completion. *South African Medical Journal, 99* (5), 354-356.

Myers, K. & Winters, N.C. (2002). Ten-year review of rating scales. II: Scales for internalizing disorders. *Journal of the American Academy of Child and Adolescent Psychiatry, 41* (6), 634-59.

Nevo, G.A. & Manassis, K. (2009). Outcomes for treated anxious children: a critical review of long-term-follow-up studies. *Depression and Anxiety, 26 (7), 650-660*.

Ngcobo, J. & Matukrishna, N. (2011). The geographies of inclusion of students with disabilities in an ordinary school. *South African Journal of Education, 31, 357-368*.

Ollendick, T.H. (1983). Reliability and validity of the Revised Fear Surgery Schedule for Children (FSSC-R). *Behaviour Research and Therapy, 21* (6), 685-692.

Osone, A. & Takahashi, S. (2006). Possible link between childhood separation anxiety and adulthood personality disorder in patients with anxiety disorders in Japan. *Journal of Clinical Psychiatry, 67* (9), 1451-1457.

Pretorius, H. 2001. Classification. In B. Robertson, C. Allwood & C. Gagiano. (Eds.), Textbook of Psychiatry for Southern Africa (pp. 7-13). Cape Town: Oxford University Press.

Reynolds, C.R. & Richmond, B.O. (1978). What I Think and Feel: A revised measure of Children's Manifest Anxiety. *Journal of Abnormal Child Psychology, 6* (2), 271-280.

Reynolds, C.R. & Richmond, B.O. (1979). Factor structure and construct validity of "What I Think and Feel": The Revised Children's Manifest Anxiety Scale. *Journal of Personality Assessment, 43*, 281-283.

Rice, F., Van den Bree, M.B.M. & Thapar, A. (2004). A population-based study of anxiety as a precursor for depression in childhood and adolescence. *BMC Psychiatry, 4*, 43.

Rood, L., Roelofs, J., Bögels, S.M. & Alloy, L. B. (2010). Dimensions of negative thinking and the relations with symptoms of depression and anxiety in children and adolescents*. Cognitive Therapy and Research, 34*, 333-342.

Sadock, B.J. & Sadock, V.A. (2003). Kaplan & Sadock's Synopsis of Psychiatry. 9th ed. Philadelphia: Lippincott Williams & Wilkins.

Seedat, S., Williams, D.R., Herman, A.A., Moomal, H., Williams, S.L. & Jackson, P.B., et al. (2009). Mental health service use among South-Africans for mood, anxiety and substance use disorders. *South African Medical Journal , 99* (5), 346-352.

Smith, J.P. & Book, S.W. (2009). Comorbidity of generalized anxiety disorder and alcohol use disorders among individuals seeking outpatient substance abuse treatment. *Addictive Behaviors, 35* (1), 42-45.

Snyder, J., Bullard, L., Wagener, A., Leong, P.K., Snyder, J. & Jenkins, M. (2009). Childhood anxiety and depressive symptoms: Trajectories, relationship, and association with subsequent depression. *Journal of Clinical Child & Adolescent Psychology, 38* (6), 837-849.

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

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

Sterba, S.K., Prinstein, M.J. & Cox, M.J. (2007). Trajectories of internalizing problems across childhood: Heterogeneity, external validity, and gender differences. *Developmental Psychopathology, 19* (2), 345-366.

Storch, E.A., Brassard, M.R. & Masia-Warner, C.L. (2003). The relationship of peer victimization to social anxiety and loneliness in adolescence*. Child Study Journal, 33* (1), 1-18.

Stringaris, A. (2011). Irritability in children and adolescents: a challenge for DSM-5*. European Child and Adolescent Psychiatry, 20*, 61-66.

Strydom, M.A.A., Pretorius, P.J. & Joubert, G. (2012). Depression and anxiety among Grade 11 and 12 learners attending schools in central Bloemfontein. *South African Journal of Psychiatry, 18* (3), 84-88.

Sze, K. M. & Wood, J. J. (2007). Cognitive behavioral treatment of comorbid anxiety disorders and social difficulties in children with high-functioning autism: A case report. *Journal of Contemporary Psychotherapy, 37* (3), 133-143.

Ter Laak. J., De Goede, M., Aleva, A. & Van Rijkswijk, P. (2005). The Draw-A-Person Test: An indicator of children's cognitive and socioemotional adaptation? *The Journal of Genetic Psychology, 166* (1), 77-93.

Van Eeden, R. (1991). Manual for the Senior South African Individual Scale – Revised (SSAIS-R). Pretoria: Human Sciences Research Council.

Van Eeden, R. & Visser, D. (1992). The Validity of the Senior South African Individual Scale – Revised (SSAIS-R) for different population groups. *South African Journal of Psychology, 63*, 163-171.

Verhulst, F.C., Van der Ende, J., Ferdinand, R.F. & Kasius, M.C. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives of General Psychiatry, 54* (4), 329-336.

Vincente, B., De la Barra, F., Saldivia, S., Kohn, R., Rioseco, P. & Melipillan, R. (2012). Prevalence of child and adolescent psychiatric disorders in Santiago, Chile: A community epidemiological study. *Social Psychiatry and Psychiatric Epidemiology, 47* (7), 1099-1109.

Vincente, B., Saldivia, S., De la Barra, F., Kohn, R., Pihan, R. & Valdivia, M., *et al*. (2012). Prevalence of child and adolescent mental disorders in Chile: a community epidemiological study. *The Journal of Child Psychology and Psychiatry, 53* (10), 1026-1035.

Warren, S.L., Huston, L., Egeland, B. & Sroufe, L.A. (1997). Child and adolescent anxiety disorders and early attachment. *Journal of the American Academy of Child and Adolescent Psychiatry, 35* (5), 637-644.

Weissman, M.M., Leckman, J.F., Merikangas, K.R., Gammon G.D. & Prusoff, B.A. (1984). Depression and anxiety disorders in parents and children: Results from the Yale Family Study. *Archives of General Psychiatry, 41*, 845-852.

Weitkamp, K., Romer, G, & Rosenthal, S. (2010). German Screen for Child Anxiety Related Emotional Disorders (SCARED): Reliability, validity and cross- informant agreement in a clinical sample. Child and Adolescent Psychiatry and Mental Health, 4 (19), 1-8.

Wiersma, J.E., Hovens, J.G. Van Oppen, P., Gillay, E.J., Van Schaik, D.J. & Beekman, A.T., et al. (2009). The importance of childhood trauma and childhood life events for chronicity of depression in adults. *Journal of Clinical Psychiatry, 70* (7), 983-989.

Wildeman, R.A. & Nomdo, C. (2007). Implementation of inclusive education: How far are we? Occasional papers. Cape Town: Institute for Democracy in Africa (IDASA).

Williams, S. L., Williams, D.R., Stein, D.J., Seedat. S., Jackson, P.B. & Moomal. H. (2007). Multiple traumatic events and psychological distress: The South Africa Stress and Health Study. *Journal of Traumatic Stress, 20* (5), 845-855.

World Health Organization. (1992). The ICD-10 classification of mental and behavioural disorders. Geneva: World Health Organization.

Worster, A. & Haines, T. (2004). Advanced statistics: Understanding medical record review (MRR) studies. *Academic Emergency Medicine*, 11 (2), 187-192.