

Early Maladaptive Schemas: The relationship with anxiety patterns, and perceived parental rearing behaviours.

By: Darryn Costello

Student Number: 206508405

Date Submitted:

Submitted in partial fulfillment of the requirements for Psychology Masters,
University of Kwa-Zulu Natal

Acknowledgements

I would like to thank my supervisor; Professor Graham Lindegger for all his continued help, support and patience, who without his ideas and vast input on the anxiety scale and project as whole, this research would not be possible. I would also like to thank my participants for their willingness to participate and taking the time to fill in the lengthy questionnaires.

Unless otherwise specified, this project is the result of my own work

Contents

1. Abstract	4
2. Introduction	5
3. Literature Review	7
3.1 History of the Schema Construct	7
3.2 Young's Schema Theory	8
3.3 Early Maladaptive Schemas	9
3.4 The Origins of Maladaptive Schemas	11
3.4.1 Core Emotional Needs	11
3.4.2 Early Life Experiences	12
3.4.3 Emotional Temperament	13
3.5 Young's 16 Cognitive Schemas	14
3.6 Early research on cognitive schemas	17
3.7 Empirical support for Early Maladaptive Schemas	17
3.8 Anxiety	19
3.9 Beck's Cognitive Schema Theory of anxiety	19
3.10 Schemas and Anxiety	21
3.11 Research on specific anxiety disorders and cognitive schemas	23
3.12 Parental Rearing Behaviours and Early Maladaptive Schemas	24
3.13 Perceived parental rearing behaviours and anxiety	25
3.14 Conclusion	28
4. Aims and Rationale	29
4.1 Research Questions	29
4.2 Hypotheses	30
5. Methodology	32
5.1 Research Design	32
5.2 Sampling	33
5.3 Data Collection	35
5.3.1 Young Schema Questionnaire (Short Form)	35
5.3.2 Anxiety Scale	35
5.3.3 Egna Minnen Beträffande Uppfostran	36
5.4 Data Analysis	38
5.5 Ethical Considerations	38
6. Results	40
6.1 General Findings	40
6.2 Dimensions of anxiety and Early Maladaptive Schemas	41
6.3 Perceived parental rearing behaviours and Early Maladaptive Schemas ..	44
7. Discussion	47
7.1 Internal Reliability	47
7.2 Six higher order domains of EMS	48
7.3 Specific EMS and the four dimensions of anxiety	51
7.3.1 Test anxiety	52

7.3.2 Social anxiety	53
7.3.3 Generalized anxiety	56
7.3.4 Trait anxiety	60
7.4. Early Maladaptive Schemas and Perceived Parental Rearing Behaviours	62
8. Concluding Remarks	66
8.1 Limitations of the research	66
8.2 Future research.....	67
8.3 Conclusion	68
9. References.....	69
10. Appendices.....	73
Appendix I: Letter to South African Anxiety and Depression Group	74
Appendix II: Informed Consent Form	76
Appendix III: Young's Schema Questionnaire (YSQ-S).....	78
Appendix IV: Anxiety Scale.....	85
Appendix V: Egna Minnen Beträffande Uppfostran (EMBU-S)	87
Appendix VI: Abbreviations for the 16 schemas	91
Appendix VII: SPSS Statistical Output.....	92
Appendix VIII: Ethical Clearance	98

1. Abstract

Since 2008 the prevalence rate of anxiety disorders has increased to 15,8%, thus putting them as the most prevalent class of psychiatric disorders in South Africa. This research firstly aimed to examine the relationship between Young's Early Maladaptive Schemas (EMS) and four patterns of anxiety. The dimensions of anxiety included test anxiety, social anxiety, generalized anxiety and trait anxiety. Secondly, it aimed to examine the relationship between early maladaptive schemas and perceived parental rearing styles, as these are believed to influence an individual's susceptibility to developing the early maladaptive schemas. The interest of the study centered on the student population of the University of Kwa-Zulu Natal (UKZN-PMB) as these dimensions were correctly thought to be prevalent in a student sample. The research utilised three questionnaires: firstly, a multidimensional anxiety scale; Young's Schema Questionnaire (YSQ-S) and the Egna Minnen Beträffande Uppfostran (EMBU-s): (My Memories of My Upbringing).

The results of this study established that test anxiety correlated well with the EMS of achievement, that social anxiety correlated well with EMS of self-evaluation, and generalized anxiety was found to correlate with specific EMS that could be the direct focus of excessive worry for university students. Finally, trait anxiety was found to be all encompassing and pervasive with it having the most significant and highest correlations with more EMS. The results regarding the perceived parental rearing behaviours found that the higher the levels of perceived parental rejection and overprotection, and lower levels of emotional warmth, the more inclined an individual is to develop an EMS. In conclusion, this study demonstrates the role that maladaptive cognitive schemas play in developing anxiety as well as the role that perceived parental rearing behaviours play in an individual developing an early maladaptive schema.

2. Introduction

This research sought to address the relationship between Early Maladaptive Schemas (EMS), patterns of anxiety, and perceived parental rearing behaviours.

Young's Schema Questionnaire (Young, 1999) states that there is a range of 16 early maladaptive cognitive schemas. This research firstly explored which specific cognitive schemas are associated with four types of anxiety, viz. generalized, social, test, and trait anxiety. Secondly it explored the relationship between Early Maladaptive Schemas and the three domains of perceived parental rearing behaviours as the EMS are thought to form early in childhood through aversive relations with primary caregivers (Schmidt, Joiner, Young & Telch, 1995). These three domains include Rejection, Emotional Warmth, and (Over) Protection. Finally, this research examined the relationship between the three domains of parental rearing behaviours and the four types of anxiety. Parental rearing behaviours are believed to play an important role in the development of anxiety disorders (Rapee, 1997).

Part of this research has previously been conducted by the researcher (Costello, 2009). However, adding the new dimensions of the domains of perceived parental rearing, the researcher refined the focus in terms of analysing the relationship between cognitive schemas and patterns of anxiety. The motivation for this research on anxiety was that the prevalence rate of anxiety disorders is currently at 15,8%, placing it as the most prevalent class of psychiatric disorders in South Africa (Stein, Seedat, Herman, Moomal, Heeringa, Kessler, & Williams, 2008). Therefore the field of anxiety requires further exploration in a South African context.

A schema, according to Young (1990, in Young, Klosko, & Weishaar, 2003) is "a broad, pervasive theme or pattern which is comprised of memories, emotions, cognitions, and bodily sensations regarding one-self and one's relationship with

others” (p. 7). The schema is developed during childhood and adolescence but is elaborated throughout one’s lifetime and may be dysfunctional to a significant degree (Young et al., 2003). Some schemas might be dysfunctional because they are self-defeating emotional and cognitive patterns which are repeated throughout life and applied consistently to situations the individual faces. Young’s early maladaptive schemas (1995, 1999) are an example of dysfunctional schemas and they are the schemas that this research used. Young (1999) stated that an individual’s behaviour is not part of the schema itself but rather that the maladaptive behaviours develop as responses to schemas thus behaviours are driven by schemas but not part of the schema.

Anxiety is defined as “a negative mood state characterised by bodily symptoms of physical tension, and apprehension about the future” (Barlow & Durand. 2005, p.120). This involves feelings, behaviours and physiological responses. This definition directly relates to the cognitive components of schemas. Anxiety symptoms are hypothesised to be a direct manifestation of the negative cognitive schema.

Susceptibilities to early maladaptive schemas and dimensions of anxiety are both said to have developed early in childhood. More specifically, that it is parental rearing styles which manifest EMS and anxiety. For this reason it was important for this research to examine the participant’s perceived parental rearing behaviours. The perceived parental rearing styles of rejection, emotional warmth and, protection were examined in order to further explore the relationship between early maladaptive schemas and dimensions of anxiety.

3. Literature Review

This study shall be a study on cognitive schemas, anxiety patterns and parental rearing behaviours. Anxiety is viewed from a cognitive perspective, more specifically, Beck's cognitive schema theory. Beck (1985, in Barlow, 2004) claimed that cognitive schemas should be viewed as the most fundamental framework in theories of psychiatric disorders. Building on Beck's notion of schemas was Young's theoretical work with regard to early maladaptive schemas.

Young (1999) defined schemas as "important beliefs and feelings about oneself and environment which the individual accepts without question" (p. 72). Schemas are thought to play an important role in the development and maintenance of psychiatric disorders (Riso, du Toit, Stein & Young, 2007). Young (1999) went on to refer to Early Maladaptive Schemas (EMS), claiming that they are formed early in childhood. It is likely that parental rearing styles play an important role in the development of EMS, which in turn are likely to be connected with dimensions of anxiety. This is the focus of this research study.

3.1 History of the Schema Construct

The term "schema" has been most widely used in psychology, although other fields such as philosophy, education and algebraic geometry have all utilised the term. In general terms, a schema is a "structure, framework, or outline" (Young, Klosko, & Weishaar, 2003, p.6). In early Greek philosophy, Stoic logicians such as Chrysippus (ca. 279-206 B.C), presented principles of logic in the form of "inference schema" (Nussbaum, 1994 in Young et al., 2003, p.6). In Kantian philosophy, a schema is a "conception of what is common to all members of a class" (Young et al., 2003, p.6).

More specifically, in psychology, "schema" was first used within the area of cognitive development. Within cognitive development, a schema is "a pattern imposed on reality or experience to help individuals explain it, to mediate

perception, and to guide their responses” (Young et al., 2003, p.6). Therefore a schema is an abstract representation of the salient characteristics of an event (Young et. al., 2003). The term is commonly associated with Piaget, who wrote about schema in different stages of childhood cognitive development. In that sense a schema guided how an individual construed information and problem-solved (Young et al., 2003). The use of schemas then moved to cognitive therapy and Beck (1967, in Young et al., 2003) referred to schemas in his early writing.

For Beck, a schema was a very broad generalising principle which organised and made sense of one’s life experiences. The most important aspect of his notion is that many schemas form early in life and continue to be involved and then superimposed on later life experiences, even if not applicable anymore (Young et al., 2003). This was referred to as the “need for ‘cognitive consistency’, for maintaining a stable view of oneself and the world, even if it is, in reality, inaccurate or distorted” (Young et al., 2003, p7). From this definition it can be seen that schemas can be positive or negative, adaptive or maladaptive and may be formed in childhood or later in life.

3.2 Young’s Schema Theory

Young’s schema focused therapy is grounded in the conceptual framework which defines schema development and maintenance, general schema characteristics, and specific schemas and their hierarchical relationship (Schmidt, Joiner, Young & Telch, 1995). A schema, according to Young (in Schmidt, et al., 1995), is a “stable and enduring structure which forms the core of the individual’s self-concept” (p. 296). He further hypothesised that some schemas are formed during childhood through noxious relationships with primary caregivers, and thus termed them early maladaptive schemas (Schmidt et al., 1995). The child used the schema to make sense of and manage their environment. In adulthood, however, the EMS creates anxiety and distress when activated by situations which are pertinent to the specific schema (Schmidt et al., 1995). Once in place, the EMS selectively filter for corroborating experience such that the schemas are extended

and elaborated throughout the individual's life. For example, the abandonment EMS is activated during real or perceived separations in adulthood. Schmidt et al. (1995) state that cognitive therapy has been applied to a variety of psychiatric disorders such as personality disorders, eating disorders and depression, all through the modification of EMS. It is Young's notion of EMS which was used in this study which investigates early maladaptive cognitive schemas in relation to anxiety patterns, and parenting styles.

3.3 Early Maladaptive Schemas

Young and associates (2003) define an EMS as "broad, pervasive themes or patterns regarding oneself and one's relationship with others that are dysfunctional to a significant degree" (p. 61). They are comprised of memories, emotions, cognitions and bodily sensations, said to develop during childhood and adolescence, and are elaborated throughout one's lifetime. They are the result of unmet core emotional needs, with aversive childhood experiences mostly being their primary origin (Young et al., 2003).

According to Young (1999), EMS have several defining characteristics. They are said to be unconditional beliefs and feelings about one's self in relation to the environment. Schemas are a priori truths that are implicit and taken for granted (Young, 1999). EMS can be contrasted with Beck's underlying assumptions. The latter holds out for the possibilities of success whereas schemas, in contrast, are usually unconditional and therefore more rigid. This unconditional nature of the EMS makes them more resistant to change and self-perpetuating.

EMS are self-perpetuating so therefore resistant to change. Because they develop early in life they are the core of the individual's self-concept and conception of the environment. The schemas are comfortable and familiar so when they are challenged the individual will distort information to maintain validity of these schemas because threat to schematic change is too disruptive to the individual's core (Young, 1999). In order for them to be an EMS they must be

dysfunctional to a significant degree and in a reoccurring manner in the individual's life. Therefore the assumption is that they can directly or indirectly lead to psychiatric disorders because the individual perpetuates their EMS in interactions with other people even though their perceptions are no longer accurate (Young, 1999).

EMS are activated or triggered by external stimuli or events in the environment which are particular to the schema. This leads to the EMS being accompanied by high levels of affective arousal, such as anxiety. The fact that EMS result in high levels of affective arousal is also a characteristic of the EMS because the high levels of arousal further exacerbate the maladaptive nature of the EMS (Young, 1999). EMS are called "early" maladaptive schemas because they seem to be the result of a child's innate temperament interacting with dysfunctional experiences within interpersonal relationships during the first few years of life (Young, 1999). They develop through ongoing patterns of everyday noxious experiences, rather than isolated traumatic events, within interpersonal relationships with care-takers and family which ultimately strengthen the EMS (Young, 1999). Million (1981, p.101, in Young, 1999) emphasises the persisting influences of early negative experiences:

Significant experiences of early life may never recur again, but their effects remain and leave their mark ... they are registered as memories, a permanent traces and an embedded internal stimulus ... Once registered, the effects of the past are indelible, incessant and inescapable ... The residuals of the past contribute their share to the present ... they guide, shape or distort the character of current events. Not only are they ever present, then, but they operate insidiously to transform new stimulus experiences in line with past (p. 11)

The term 'Early Maladaptive Schema' captures the verbal and behavioural content of schemas so is therefore more accessible than other definitions of schemas. This notion is convenient for research as self-report instruments can then be used. An individual can be asked how applicable a statement is to them because they are able to verbalise their negative cognitions, because they are able to see the negative cognitions being expressed through their behaviours (Riso et al., 2007).

Young et al. (2003) state that maladaptive behaviours developed in response to EMS, so that behaviours are driven by the EMS but are not part of the EMS. Furthermore, schemas are dimensional in that they have different levels of severity and pervasiveness. The more severe the schema is, the greater the number of situations that activate it. Additionally, the more severe the schema is, the more intense the negative affect when triggered and the longer it lasts (Young et al., 2003).

3.4 The Origins of Maladaptive Schemas

3.4.1 Core Emotional Needs

Young and his colleagues (2003) claim that schemas result from unmet core emotional need in childhood. They list five emotional needs for human beings: Secure attachments to others (including safety, stability, nurturance, and acceptance), autonomy, competence and sense of identity, freedom to express valid needs and emotions, spontaneity and play, and finally realistic limits and self-control. Their view is that these needs are universal, that everyone has them, although some individuals have stronger needs than others. A psychologically healthy individual is one who can adaptively meet these core emotional needs (Young et al., 2003).

According to Young and associates (2003) the interaction between the child's innate temperament and early toxic environment results in the frustration, rather than gratification, of these basic needs

3.4.2 Early Life Experiences

According to Young et al. (2003) toxic childhood experiences are the primary origin of EMS. The schemas that develop earliest, and are the strongest, typically originate in the nuclear family. Moreover, the dynamics of a child's family are the dynamics of that child's entire early world. They further state that when individuals find themselves in adult situations that activate their EMS, what they usually are experiencing is a drama from their childhood, usually with a parent (Young et al., 2003). They do however claim that other influences such as peers, school, groups in the community, and the surrounding culture become increasingly important as the child matures, and may lead to the development of schemas later on in life. According to Young and associates (2003) schemas that develop later in life are not as pervasive or as powerful as those formed during early childhood.

Young and his colleagues (2003) claim that there are four types of early life experiences that foster the acquisition of EMS. The first is toxic frustration of needs. This pertains to when the child experiences too little of a good thing and acquires schemas such as Emotional Deprivation or Abandonment through deficits in the early environment. The child's environment is missing something important, such as stability, understanding or love (Young et al., 2003).

The second type of early life experience that facilitates EMS is traumatisation or victimisation. This is when the child is harmed or victimised and develops schemas such as Mistrust/Abuse, Defectiveness/Shame, or Vulnerability to Harm (Young et al., 2003).

In the third type, the child experiences too much of a good thing: the parents provide the child with too much of something that, in moderation, is healthy for a

child (Young et al., 2003). With schemas such as Dependence/Incompetence or Entitlement/Grandiosity, the child is rarely mistreated and rather indulged or overprotected. The child's core emotional need for autonomy or realistic limits are not met. Thus parents may be overly involved in the child's life, may overprotect the child, or may give a child an excessive degree of freedom and autonomy without any limits (Young et al., 2003).

The final type of life experience that creates schemas is selective internalisation or identification with significant others. Here the child selectively identifies with and internalises the parent's thoughts, feelings, experiences, and behaviours (Young et al., 2003). Some of these identifications and internalisations become schemas. Young and associates (2003) believe that temperament partly determines whether an individual identifies with and internalises the characteristics of a significant other.

3.4.3 Emotional Temperament

Young et al. (2003) believe that factors other than early childhood environment also play a significant role in the development of EMS. It is believed that the child's emotional temperament is especially important, as most parents soon realise each child has a unique and distinct personality or temperament from birth. Young, Klosko and Weishaar (2003) hypothesise that the following binary dimensions are largely inborn and relatively unchangeable through psychotherapy alone: Labile ↔ Nonreactive; Dysthymic ↔ Optimistic; Anxious ↔ Calm; Obsessive ↔ Distractible; Passive ↔ Aggressive; Irritable ↔ Cheerful; Shy ↔ Sociable. They refer to temperament as the individual's unique mix of points on this set of dimensions.

Emotional temperaments interact with aversive childhood events in the formation of EMS. Different temperaments selectively expose children to different life circumstances (Young et al., 2003). Similarly, different temperaments render children differentially susceptible to similar life experiences. Given the same

parental treatment two children may react very differently. According to Young et al. (2003) an extremely favourable or aversive early environment can override emotional temperament to a significant degree. In addition, an extreme emotional temperament can override an ordinary environment and produce psychopathology without apparent justification in the individual's history (Young et al., 2003).

3.5 Young's 16 Cognitive Schemas

From Young's extensive work with clinical samples, he identified 16 EMS which were grouped within six higher order areas of functioning:

instability/disconnection, impaired autonomy, undesirability, restricted self-expression, restricted gratification and impaired limits (Schmidt et al., 1995).

The instability /disconnection domain refers to the expectation that intimate relationships will not provide security, nurturance or stability (Schmidt et al., 1995). The typical family of origin is detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive (Young et al., 2003).

There are three primary EMS within this domain. *Abandonment* is the perceived instability or unreliability of those available for support and connection (Young, 1999). *Mistrust/Abuse* is the expectation that others are abusive, humiliating, hurtful or manipulative (Schmidt et al., 1995). *Emotional deprivation* is the expectation that one's needs for nurturance and affection will never be adequately met (Schmidt et al., 1995).

The domain of impaired autonomy entails expectations regarding one's ability to separate and function independently from others. Typical family origin is enmeshed or overprotective (Young et al., 2003).

This domain includes three primary EMS (Schmidt et al., 1995).

Dependence/incompetence refers to the belief that one is unable to competently

manage everyday responsibilities (Schmidt et al., 1995). *Vulnerability to harm/illness* is the exaggerated fear that imminent catastrophe will strike any time and one will be unable to prevent it (Schmidt et al., 1995). *Enmeshment* is excessive emotional involvement with others due to the belief that the enmeshed individual cannot survive or be happy without constant support (Schmidt et al., 1995).

The domain of undesirability contains four primary EMS with the perceptions that one is different from others and undesirable in terms of physical attractiveness, social skills, moral integrity or personality (Schmidt et al., 1995). Here the typical family of origin is undermining of the child's performance, or failing to reinforce the child for performing competently outside the family (Young et al., 2003).

Defectiveness/Shame is the belief one is internally defective and as a result fundamentally unlovable (Schmidt et al., 1995). *Social undesirability* is the belief that one is isolated from others due to an outward feature such as appearing dull or ugly (Schmidt et al., 1995). *Failure to achieve* is the belief that one is fundamentally inadequate relative to others and therefore destined to fail in areas of achievement (Schmidt et al., 1995). *Social isolation* is the feeling that one is isolated from the rest of the world, different from others and not part of a community or group (Young, 1999).

The domain of restricted self-expression contains two EMS which describe excessive suppression or restriction of emotion (Schmidt et al., 1995). The typical family of origin is based on conditional acceptance, such that the child must suppress important aspects of themselves in order to gain love, attention, and approval (Young et al., 2003).

Subjugation is the perception that one's personal desires are unimportant in comparison to the preferences of others (Schmidt et al., 1995). *Emotional inhibition* is the expectation that emotional expression leads to negative

consequences such as harm to others, embarrassment or fears or loses of control of one's impulses (Schmidt et al., 1995).

The domain of restricted gratification contains two EMS which describe an excessive emphasis on work or responsibility to others (Schmidt et al., 1995). The typical family of origin is grim, demeaning, and sometimes punitive: performance, duty, perfectionism, following rules, hiding emotions predominates over pleasure, joy, and relaxation (Young et al., 2003).

Self-sacrifice refers to exaggerated expectations of duty and responsibility to others at the expense of one's own gratification (Young, 1999). *Unrelenting standards* is the expectation that one unrealistically and impossibly must fulfill high internalised standards to avoid criticism (Schmidt et al., 1995).

The final domain of impaired limits consists of two EMS which describe deficiencies in self-discipline and in setting emotional and interpersonal limits (Schmidt et al., 1995). Typical family of origin is characterised permissiveness, overindulgence, lack of direction, or a sense of superiority rather than appropriate confrontation, discipline, and limits in relation to taking responsibility, cooperating in a reciprocal manner, and setting goals (Young et al., 2003).

Entitlement is the expectation that one is superior to others and therefore can act without regard for others (Young, 1999). *Insufficient self-control* is the expectation that self-discipline is not important and that emotions and impulses require little restraint (Schmidt et al., 1995).

3.6 Early research on cognitive schemas

Early attempts to study cognitive schemas used pencil and paper measures such as the Dysfunctional Attitudes scale. One particular study (Weismann & Beck, 1978, in Riso et. al, 2007) found that individuals ill at the time of the study scored higher on self-report inventories measuring dysfunctional schemas. But later it was found that scores normalised with symptomatic recovery. Therefore following recovery the schemas went dormant and were difficult to detect (Riso et al., 2007). Therefore more research was required in the field of cognitive schemas and psychopathology.

The next generation of research studied cognitive schemas using information processing tasks. It was assumed that information tasks would be less prone to reporting bias and more able to detect latent schemas especially when tasks were accomplished by an effort to activate the schema (Riso et al., 2007). It was found that depressed individuals were more biased toward recall of negative and self-referent information and more biased in recall after a sad mood induction (Riso et al., 2007). This showed that schemas are latent during non-symptomatic periods and are readily accessible and impact on cognitive processing when activated.

3.7 Empirical support for Early Maladaptive Schemas

There has been substantial research using Young's schema theory and more specifically Young's Schema Questionnaire with regard to personality disorders and chronic depression. The research conducted has varied from being conducted on clinical samples to non-clinical samples, with them all yielding significant results (Young et al., 2003). Most research conducted on Young's EMS has been done using the long form of the Young Schema Questionnaire (Young et al., 2003). Although, the short form of the Young Schema Questionnaire has been found to have good psychometric properties and found to be a good instrument for both research and clinical activities (Trip, 2006; Welburn et al., 2002). Both Trip (2006) and Welburn and colleagues (2002)

study's concluded that maladaptive schemas play a very important role in the maintenance and development of psychiatric disorders.

The first comprehensive investigation on the Young Schema Questionnaire's psychometric properties was conducted by Schmidt, Joiner, Young and Telch (1995). It was found to have strong Cronbach alpha coefficients as well as test-retest coefficients in a non-clinical population. The primary subscales demonstrated high test-retest reliability and internal consistency. The questionnaire also demonstrated good convergent and discriminant validity on measures of psychological distress, self-esteem, cognitive vulnerability to depression and personality disorder symptomatology in non-clinical samples (Schmidt et al., 1995).

Lee, Taylor, and Dunn (1999, in Young et al., 2003) conducted research using a clinical population in Australia. Overall, the research showed that there is a very good internal consistency with regard to the Young Schema Questionnaire and that its primary factor structure is stable across clinical samples from two different countries, and for diagnoses ranging from Axis I to Axis II disorders. It was concluded that EMS are present in normal populations but that they become exaggerated and extreme in clinical populations.

Carine (1997, in Young et al., 2003) investigated the utility of Young schema theory in the treatment of personality disorders by using EMS as predictor variables in a discriminant function analysis. Specifically Carine looked at whether the presence of Young's schemas discriminated patients with DSM-IV Axis II psychopathology from patients with other types of psychopathology. It was found that group membership in Axis II was predicted 83% of the time. Furthermore, supporting Young's theory, Carine found that affect appears to be an intrinsic part of schemas.

3.8 Anxiety

Barlow and Durand (2005, p.121) define anxiety as a “mood state characterised by marked negative affect and bodily tension in which a person apprehensively anticipates future danger or misfortune” (p. 121). This involves feelings, behaviours and physiological responses and this directly relates to the components of an EMS, such that there is a behavioural, cognitive and physiological component to anxiety and to EMS. There are various forms of anxiety; these include anxiety as an emotion, as a personality trait and as a disorder.

Spielberger (1966, 1972, in Blankstein, 1976) coined the terms ‘state’ and ‘trait’ anxiety. State anxiety refers to a “temporary condition that fluctuates over time in response to situational changes” (Blankstein, 1976, p. 781). This refers to anxiety as an emotion; the emotional response of anxiety is dependent on the situation. Spielberger’s trait anxiety refers to “relatively stable individual differences in anxiety levels” (Blankstein, 1976, p. 781). This refers to the stable and enduring personality traits that one has and this then refers to when anxiety is a personality trait of the individual. The final type of anxiety is that which appears in the classification of anxiety disorders. Anxiety disorders are essentially abnormal forms of state anxiety. There is a shift from a normal emotional response to a disorder when the type of anxiety causes significant impairment in social and occupational functioning as well as causing the individual significant distress (American Psychiatric Association, 2000).

3.9 Beck’s Cognitive Schema Theory of anxiety

Beck claimed that emotions and anxiety are “complex biopsychosocial responses with important evolutionary, biological, affective and cognitive components” (Barlow, 2004, p.51). He went on to state that emotions are instinctual and based on survival reactions to an environment and that this has changed greatly over the course of evolution (Barlow, 2004). Beck suggests that the behavioural expression and action set associated with fear, which was adaptive during the

millennia when human beings were hunter-gatherers, may no longer be appropriate when threats and danger are primarily psychological rather than physical (Barlow, 2004). It is when responses to emotion such as anxiety are “inappropriate, exaggerated or disordered” (Barlow, 2004, p.51) that he emphasises the importance of the cognitive factors. Thus Beck’s theorising is confined largely to instances where danger is misperceived or exaggerated.

The locus of the problem in the anxiety disorders is not in the affective system, but rather in the hypervalent cognitive schema, where reality is continually interpreted as dangerous (Barlow, 2004). This gives rise to Beck’s “cognitive triad”, which entails perceptions about one’s self, the world and the future, all of which are continually processed in a distorted way as dangerous (Barlow, 2004). Therefore states of anxiety are associated with automatic thoughts which reflect danger in one’s life.

For Beck it is automatic thoughts, which lead to misperceiving and misinterpreting danger which arise from distorted information processing that trigger the inappropriate physiological and affective responses to anxiety (Barlow, 2004). Beck (1985, in Barlow, 2004) claims that the causes of anxiety are based on incorrect information processing, and the automatic thoughts present within an irrational, hypervalent, cognitive schema, which are not always obvious to the individual.

Automatic thoughts are moment-to-moment, spontaneous cognitions that occur without effort, in response to specific situations. They are often negatively distorted representing catastrophizing or personalisation (Riso et al., 2007). They are important because they are tightly associated with both the individual’s mood and his/her behavioural response to situations. Negative automatic thoughts are greatly influenced by the individual’s underlying cognitive schemas, particularly when these schemas are activated (Riso et al., 2007).

Beck went on to state that schemas may be active at one point in time and not another because they are triggered by environmental stimuli (Young, 1999). Furthermore, schemas bias one's interpretations of events in a consistent manner. These biases in psychopathology are evident in the misconceptions, distorted attitudes, invalid premises, and unrealistic goals or expectations of the individual (Young, 1999).

3.10 Schemas and Anxiety

Due to the cognitive component of anxiety, i.e. the misperceiving and misinterpreting danger which arose from distorted information processing, cognitive approaches, such as schema theory, have been applied to the understanding of these various forms of anxiety. According to Starcevic and Berle (2006), the main premise regarding Beck's cognitive schema theory is that there are "abnormalities in appraisal or information processing" (p. 51) and it is these abnormalities that cause anxiety. They also agree that certain beliefs or underlying cognitive processes (i.e. cognitive schemas) predispose one to specific anxiety disorders (Starcevic & Berle, 2006). The claim that there is cognitive specificity in anxiety disorders has implications for the conceptualisation, classification, and treatment of these conditions (Starcevic & Berle, 2006).

This study seeks to examine four major anxiety dimensions on a dimensional scale constructed from the Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM- IV-TR) (American Psychiatric Association, 2000). The term 'dimension' was chosen because one cannot claim that non-clinical participants have a disorder from completing one questionnaire. Rather one would argue for a dimensional approach to anxiety more generally and the recognition that anxiety can be a personality trait and a normal emotion. One can only address a dimension of a disorder which may manifest itself in everyday life but it is not conclusive enough to say that it is a disorder. Therefore, this research shall refer

to dimensions of anxiety because the degree of the certain dimension was measured, not whether the participants have a disorder.

The dimensions include trait anxiety, test anxiety, social anxiety and generalized anxiety. These four were originally chosen on the basis of how common they are likely to be among students (Costello, 2009). Trait anxiety was used as a general measure of anxiety as a personality trait, based on the work of Spielberger. Test anxiety was thought to be a very common and specific form of anxiety among students. Social anxiety is especially relevant in a student population, with the pressure of peer relationships. The final facet of anxiety to be tested is generalized anxiety, which is characterised by an “intense, uncontrollable, unfocussed, chronic and continuous worry that is distressing and unproductive accompanied by physical symptoms” (Barlow & Durand, 2005, p127). Generalized anxiety is also on the rise as the most prevalent disorder in South Africa and therefore is important to include in the questionnaire (Stein et al., 2008).

A dimensional approach to anxiety is to be used for this study because it is more appropriate than the categorical approach of the DSM-IV, because it shows the degree or ‘how much’ of a certain dimension of anxiety the participant has and this can be measured in relation to the cognitive schemas. The dimensional approach to understanding anxiety can be seen in research conducted on children. For a long time, anxiety disorders in children have been regarded as a different type of psychopathology to anxiety disorders in adults. But after the publication of the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000), this state of affairs has changed. With the exception of separation anxiety, all childhood anxiety disorders are subsumed under the adult disorders (Gruner, Muris, & Merckelbach, 1999). Empirical evidence in a factor analytic study found that anxiety symptoms in normal children can be clustered into subtypes of anxiety problems that are consistent with the classification of anxiety disorders as

proposed by the DSM-IV (Gruner, Muris, & Merckelbach, 1999). In other words, there seems to be a continuum between normal anxiety and clinical manifestations of anxiety. This premise is very important for the understanding of anxiety along a continuum basis that this research seeks out to address.

Thus this study intends to investigate the characteristics of specific types of anxiety on a continuum, as opposed to a dichotomous scale. Gaining an understanding of which, if any of the specific cognitive schemas of individuals links with which of the specific anxiety domains, based on a more dimensional approach, could revolutionise the way therapy is used in the treatment of anxiety disorders, or even coping with normal anxiety. Therapy would be directed at altering the negative automatic thoughts and addressing the underlying EMS responsible for the distorted information processing (Barlow, 2004) depending upon how much of the anxiety characteristics the patient has.

3.11 Research on specific anxiety disorders and cognitive schemas

Clinical research examining early maladaptive schemas was done on obsessive-compulsive disorder and posttraumatic stress disorder. Riso et al. (2007) hypothesised that the higher order cognitive schema of impaired autonomy is linked with obsessive-compulsive disorder. This is because it has three primary criteria which link them, vulnerability to harm, difficulty in adapting and the need for control. Riso et al. (2007) hypothesised that posttraumatic stress disorder is believed to be linked with impaired autonomy and self-expression, as the criterion of self-blame for the trauma, negative cognitions about the self and about the world.

Costello (2009) found that there is a cognitive dimension to anxiety, and more specifically that specific early maladaptive schemas correlate with specific dimensions of anxiety. He also found that early maladaptive schemas may affect the type of anxiety as well as susceptibility to anxiety. This has major implications for therapy in terms of understanding, and working on negative cognitions may

relieve an individual of the symptoms of the specific types of anxiety (Costello, 2009). However, in terms of trait anxiety this may be more challenging as Costello (2009) found that the individual accepts the negative cognitions as personality traits and thus the personality traits are more rigid and pervasive. However, it was hypothesised that the personality trait may also be changed if the underlying early maladaptive schemas were found (Costello, 2009).

3.12 Parental Rearing Behaviours and Early Maladaptive Schemas

The Eigna Minnen Beträffande Uppfostran (EMBU): (My Memories of My Upbringing) is among the most widely utilised measures for the assessment of adults' perceptions of their parents' rearing behaviour (Arrindell et al., 1999; Arrindell et al., 2001).

The three subscales of the assessment are rejection, emotional warmth and protection. Rejection represents elements of punitive, shaming, and indifferent behaviour, favouring of siblings over the subject, and verbal or physical hostility by the parent (Arrindell et al., 1999). Emotional warmth entails physical and verbal signs of parental love, affection, and acceptance (Arrindell et al., 1999). Finally, protection refers to overprotective behaviour, and contains items relating to attempts made by the parents to control their child's behaviour, over-concern about their safety, and intrusive over-involved behaviour (Arrindell et al., 1999).

The EMBU has been widely used in studies of rearing style and different psychopathological conditions in several different countries (Arrindell et al., 1999; Arrindell et al., 2001). Different versions of the EMBU have also been constructed in order to evaluate, not the memories of adults about the rearing style of their parents, but rather parents' current rearing behaviour of adolescents (Arrindell et al., 1999) and children, as well as what parents have to say about their parental rearing behaviours with their children (Castro et al., 1993).

Surprisingly few studies have researched the claim that early maladaptive schemas are formed during childhood. There are two such studies; firstly research by Muris (2006) which investigated early maladaptive schemas in a non-clinical adolescent sample in relation to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. Regarding the correlation between EMS and perceived parental rearing behaviours it was found that detrimental parental rearing behaviours were associated with the presence of maladaptive schemas (Muris, 2006), indicating that high levels of rejection, control and anxious rearing and low levels of emotional warmth were related to higher scores on the EMS. Muris (2006) concluded by stating that parental rearing behaviours accounted for a significant proportion of the variance in the EMS scores, particularly the subscales of rejection and control.

Secondly, research by Cukor (2004) investigated the association between retrospectively perceived parental rearing styles and early maladaptive schemas. His results concluded that poor parenting practices were associated with the presence of maladaptive schemas. Specifically, low levels of parental care were associated with the early maladaptive schemas of abandonment, emotional deprivation, mistrust and abuse, and social isolation (Cukor, 2004).

3.13 Perceived parental rearing behaviours and anxiety

Previous research regarding perceived parental rearing behaviours has examined which variable might put a child at risk for developing high levels of anxiety or even anxiety disorders. Gruner, Muris and Merckelbach (1999) offer three hypotheses. The first one is biological in nature and focuses on the genetically transmitted temperament that predisposes children to develop fears and anxiety. The second hypothesis emphasises that certain parental rearing behaviours and/or specific patterns of attachment would generate high levels of anxiety in children. A third hypothesis combines these two notions and stresses the interaction between genetic and environmental factors (Gruner et al., 1999).

For this research the second hypothesis is the one of interest, where theoretical models of anxiety disorders have emphasised the influence of parenting on the development, maintenance, and amelioration of anxiety (Chorpita & Barlow, 1998; McLeod, Wood & Weisz, 2006; Rapee, 1997).

Traditional models of childhood anxiety sought to explain the development of anxiety in terms of single main effects, and focused primarily on the broad parenting dimensions of acceptance versus rejection and psychological granting of autonomy versus psychological control (McLeod et al., 2006; Rapee, 1997). Both represent bipolar parenting dimensions, with positive parenting practices at one end of the continuum such as acceptance, and negative parenting practices at the other end of the continuum such as rejection (McLeod et al., 2006).

Arrindell, Emmelkamp, Monsma, and Brilman (1983) asked anxiety disordered patients and normal controls to retrospectively judge the rearing practices of their parents. Results indicated that anxiety disordered patients perceived their parents to be more rejecting and controlling, and less emotionally warm. In their study Gruner and associates (1999) found parental rejection to be the strongest predictor of anxiety symptoms in children. Secondly, anxious parenting and, to a lesser degree, parental control were also found to account for a significant proportion of the variance of children's anxiety symptoms. Thirdly, emotional warmth was not related to anxiety symptoms (Gruner et al., 1999). According to McLeod and colleagues (2006), parental rejection suggests low levels of parental warmth, approval, and responsiveness (i.e., coldness, disapproval, and unresponsiveness). Parental rejection is hypothesised to undermine children's capacity for emotion regulation, thereby increasing sensitivity to anxiety (Rapee, 1997). Hence, parental rejection is hypothesised to put children at an increased risk for developing anxiety problems.

Parental rearing style has been linked to the transmission of anxiety from parents to their children (Chorpita & Barlow, 1998). Empirical evidence illustrated for instance that parents might enhance anxious responding in their children, as children who discussed ambiguous situations with family members showed an increased tendency for avoidant strategies. In a theoretical analysis of environmental influences on the development of anxiety, Chorpita and Barlow (1998) noted that the combination of the parenting styles of overprotection and low warmth by the parent has a relatively strong influence on the development of anxiety in children. The authors suggest that when parents are highly controlling, the experience of diminished control in children might lead to an increased tendency to interpret events as out of their control (Chorpita & Barlow, 1998). Similarly, by a lack of warmth or responsiveness, children are taught that their actions may not control or influence important reinforcers in the environment, thus feeling that they are not able to control, and may never be able to control their environment, resulting in anxiety (Chorpita & Barlow, 1998).

Parental control involves excessive parental regulation of children's activities and routines, encouragement of children's dependence on parents, and instruction to children on how to think or feel (McLeod et al., 2006). Some theoretical models such as that proposed by Chorpita and Barlow (1998) hypothesise that when parents are highly controlling in contexts when it is developmentally appropriate for children to act independently, such as attending school, children may experience decreased self-efficacy, and thus, increased anxiety about their ability to function on their own within their environments (McLeod et al., 2006; Rapee, 1997). Subsequently these models have hypothesised that parental encouragement of children's autonomy and independence in new contexts may enhance children's perceptions of mastery over the environment, leading to anxiety reduction (Chorpita & Barlow, 1998).

3.14 Conclusion

In conclusion, this literature examined Young's notion of early maladaptive schemas in relation to dimensions of anxiety and perceived parental rearing behaviours. It was set against the backdrop of Beck's cognitive schema theory and further developed by Young. Research has shown that there could be a relationship between early maladaptive schemas and patterns of anxiety and that EMS may make one more or less susceptible to anxiety. As Young's schemas are known as early maladaptive schemas it is assumed that they are installed during childhood as the result of a combination of an inherited vulnerable temperament, in particular, anxiety with regard to this research, and enduring patterns of dysfunctional interactions with parents. Although relevant literature has been discussed, surprisingly few studies have examined the notion of anxiety in relation to early maladaptive schemas, and parental styles. This is the focus of this study examined, specifically in a South African context.

4. Aims and Rationale

This research sought to investigate whether particular cognitive schemas and parenting behaviours are associated with an individual's proneness to patterns of anxiety. The primary aim of this study was to investigate whether specific early maladaptive cognitive schemas are associated with specific dimensions of anxiety. The second aim of this research was to investigate if there is a relationship between early maladaptive schemas and perceived parental rearing behaviours. This field of research has yet to be conducted in a South African context and was therefore a relevant topic. Initially this research sought to compare a clinical sample with a normative non-clinical sample (i.e. university students). However, due to the poor response rate of the clinical sample the comparison notion was dropped and the research exclusively used the normative student sample. This research has still helped bridge the gap in the research on cognitive schema theory, parental styles and, anxiety traits and disorders.

4.1 Research Questions

- Is there a relationship between the early maladaptive schemas, patterns of anxiety and the domains of perceived parental rearing?
- Are early maladaptive schemas associated with specific patterns of anxiety, and perceived parental rearing behaviours?
 - If so, which early maladaptive schemas are associated with which specific patterns of anxiety?
 - Which early maladaptive schemas are associated with which specific domain of perceived parental rearing?

4.2 Hypotheses

In order to examine the relationship between the cognitive schemas and the specific dimensions of anxiety, the researcher hypothesised possible relationships by using the DSM-IV-TR anxiety criteria (American Psychiatric Association, 2000) and the six higher order cognitive schema categories, based on Young's specific schema theory (Costello, 2009).

1. There is a significant relationship between test anxiety and the higher order cognitive schema of Undesirability.
2. There is a significant relationship between social anxiety and firstly, Undesirability, and secondly, Self-Expression.
3. There is a significant relationship between generalized anxiety and the Instability and Disconnection dimension of schemas.
4. A significant relationship is hypothesised between trait anxiety and Impaired Autonomy.

The rationale for the predicted association with test anxiety is because within the domain of Undesirability there is an EMS that is related to failure to achieve and not performing in comparison to others.

The rationale for the social anxiety hypotheses is that the EMS of Undesirability is due to thoughts of being undesirable in social skills or situations under scrutiny. Secondly, the domain of Self-Expression involves a fear of emotional expression resulting in embarrassment.

Generalized anxiety was hypothesised to link with the higher order cognitive schema of Instability and Disconnection because of the difficulty controlling excessive worry.

Finally, trait anxiety was hypothesised to be associated with Impaired Autonomy because it is generally about the functioning of one's everyday life, mentally, emotionally and physiologically. The link here with Trait anxiety is that the person

would be expected to behave the same in every aspect of their life because the anxiety would be a personality trait of the individual.

5. Finally a significant relationship is hypothesised between rejection and (over) protection, (and low levels of emotional warmth), and higher EMS scores.

Due to the negative nature of rejection and the maladaptive nature of the schemas it was hypothesised that there would be numerous correlations. What is of interest is the degree of association between the EMS and the perceived parental rearing behaviours; therefore it was hypothesised that the correlations between the two variables would be of a high correlation and thus a strong relationship.

5. Methodology

5.1 Research Design

This research design called for an exploratory quantitative design (Durrheim, 2006). Firstly, it was an exploratory study as it explored the relationships between cognitive schemas, anxiety domains, and parenting styles which is a relatively unknown area of research, particularly in a South African context. Secondly, a quantitative approach was used as the data collection was in the form of numbers from the three questionnaires, thus analysed in the form of statistics, so one can draw inferences from the research (Durrheim, 2006). A second reason for a quantitative design is because it stems from a positivistic paradigm. In this paradigm the “stable external reality” (Terre Blanche & Durrheim, 2006, p. 6) makes up the focus of what is to be studied, objectively removing the researcher from the data (Terre Blanche & Durrheim, 2006).

As this study aimed to explore the relationship between the three variables viz., four dimensions of anxiety, 16 cognitive schemas, and three parental rearing behaviours which make up part of the stable external reality, the study used a correlational design. In the correlational matrices the independent variables used are the 16 cognitive schemas, while the dimensions of anxiety and, the parental rearing behaviours are the dependant variables. This allowed the researcher to see which specific EMS correlated with which of the dimensions of anxiety, and which of the EMS with which of the parental rearing behaviours.

5.2 Sampling

Initially the researcher sought out populations of people with the different anxiety disorders, and wanted to compare them on the cognitive schemas, and contrast them with a non-clinical sample. This would have allowed for a more in depth analysis of the implications of early maladaptive schemas for the maintenance and degree of severity of anxiety disorders. Therefore, initially this research sample consisted of a non-clinical sample and a clinical sample. The sampling technique which was used for both samples of this research was convenience sampling. Convenience sampling refers to collecting a sample that is convenient to gain access to for the researcher. It is however, dependent on their willingness and availability to participate (Durrheim & Painter, 2006). Convenience sampling was thought to be sufficient for both samples because of the availability of large numbers of participants for this study. If the researcher found that this sampling technique was not accumulating the required number of participants, snowball sampling would be used. This refers to accumulating the required sample size by means of contacts and references from participants already found (Durrheim & Painter, 2006).

The most convenient sample for the non-clinical sample was students, especially psychology undergraduate students. Participants were both male and female, 18 years and older and of any racial background. The target sample size for this sample was 100. The sampling frame for the clinical sample was the South African Depression and Anxiety Group (SADAG). Electronically SADAG send out a monthly newsletter, the researcher contacted the head of SADAG with a letter regarding the research (See Appendix I) and asked to be mentioned in the monthly newsletter. Potential participants then emailed the researcher if they were interested in participating in the study. Participants, as in the non-clinical sample, are both male and female, 18 years and older and of any racial background. The target size for this clinical sample was 100. SADAG is the country's largest and most recognised mental health initiative. Therefore the total target sample size for this research was 200.

The larger the sample size, the less chance for standard error (Durrheim & Painter, 2006). The reason that both sexes were used is because results may have reflected gender issues unanticipated by the researcher. Because participants were older than 18 they could consent to partake in the study themselves without acquiring consent from a guardian.

There was a positive response rate from the non-clinical sample and a total of 113 questionnaires were completed. A natural word-of-mouth snowballing effect occurred, thus the extra 13 questionnaires. Regarding the clinical sample, the researcher received 16 requests for questionnaires after the first month SADAG sent out the newsletter, then received 12 requests the second month and 8 the third month. Thus a total of 36 questionnaires were completed by the clinical sample. Due to the poor nature of the response rate the researcher decided to exclude the clinical sample from the research and to rather exclusively use the non-clinical, normative sample as such a low response rate would yield insignificant comparisons.

Sample Characteristics

<u>Sex</u>	
Number of Female participants	85
Number of Male participants	28
Total number of participants	113
<u>Age</u>	
18 – 19 years old	4
20 – 22 years old	62
23 -- 25 years old	31
26 -- 29 years old	14
30 – 36 years old	2
Total number of participants	113

5.3 Data Collection

5.3.1 Young Schema Questionnaire (Short Form)

This research required the use of three questionnaires. Firstly, the Young Schema questionnaire (short form, YSQ-S) consists of 75 items which are distributed on the sub-scales of the 15 schemas. A further five items (i.e. one extra cognitive schema) have been added by the researcher from the long form of Young's Schema questionnaire. The reason being, that the higher order domain of Undesirability was not included in the short form of the questionnaire and this cognitive schema is hypothesised as having a link with two of the dimensions of anxiety for this research. Therefore the Young Schema questionnaire used for this research consisted of 80 items and thus 16 schemas (See Appendix III).

A study done by Welburn and associates (2002) examined the psychometric properties of the YSQ-S with a large sample of patients in a psychiatric day treatment program. The factor analysis supported the 15 schema subscales proposed by Young; the 15 subscales demonstrated good internal consistency, thus indicating that the YSQ-S sets out to measure what it intends to. Trip (2006) also found the YSQ-S and its sub-scales to possess very good reliability, with the Cronbach's Alpha coefficients occurring between 0.68 and 0.96. The discriminative validity of the YSQ-S was also investigated in that study and the measure was found to possess good discriminative validity, differentiating between low scores and high scores for the levels of state and trait anxiety (Trip, 2006).

5.3.2 Anxiety Scale

The second measure used for this research is an anxiety scale, which was developed by the researcher and supervisor. This was developed for a previous research project (Costello, 2009) to measure the four dimensions of anxiety (See Appendix IV). The researcher's Anxiety Scale contains 25 items, distributed over

the four sub-scales. Three of the four sub-scales have five items each; trait anxiety has 10 items, and all the items were arranged in the form of a four-point Likert scale. The specific items for the three sections were based upon DSM-IV-TR criteria regarding each of the three sub-scales. The final section which was comprised of 10 items was directly pooled from Spielberger's State-Trait Anxiety Inventory, specifically the Trait section of the inventory. The three scales which were developed from the DSM-IV-TR were turned into dimensional rather than categorical scales, to allow for normal expression.

Costello (2009) found the Cronbach's Alpha coefficients of the Anxiety Scale as a whole to be 0.787. This size relationship indicates a high correlation and strong relationship. This suggests that the multi-dimensional anxiety scale constructed was a reliable measure and the items of the scale correlated well with each other as well as with the test, thus having good internal reliability.

5.3.3 Egna Minnen Beträffande Uppfostran

Thirdly, a short version of the EMBU (Swedish acronym for 'My memories of my upbringing') was used (See Appendix V). The EMBU is a widely utilised measure for the assessment of adults' perceptions of their parents' rearing behaviour (Arrindell et al., 1999; Arrindell et al., 2001). The EMBU provides four subscale measures: Rejection, Emotional Warmth, (Over) Protection and Favoring Subject. The measure as a whole contains a sizeable number of items, namely 81 (Arrindell et al., 1999).

It was out of necessity in a research and/or clinical context that Arrindell and associates (1999) developed a short form of the EMBU (s-EMBU) which consists of three scales (Rejection, Emotional Warmth, and Protection) with a total of 23 items. This was developed from the original 81 item version, and after much research focusing on measuring the factorial and/or construct validity and, reliability of the short EMBU, the short EMBU is now recommended as a reliable

functional equivalent (Arrindell et al., 1999; Arrindell et al., 2001, Arrindell et al., 2005,).

This questionnaire measuring perceptions of parental rearing behaviours consists of 23 items which are allocated to three subscales, each representing an important domain of parental rearing, and each having 10 items: Control, Rejection, and Emotional Warmth. The questions are answered on a four-point Likert scale. The short version of the EMBU was used as the research as a whole already contained a sizeable number of items. High scores on the rejection and protection subscales and low scores on the Emotional Warmth scale indicate more negative recalled parental rearing behaviours

5.4 Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyse the data. The data, once collected, was coded and entered into SPSS in order to conduct statistical analysis of the data. The specific type of multivariate data analysis that was used was a correlation matrix; because they show the variables in a matrix form, in relation to each other (Tredoux et al., 2006). This form of multivariate data analysis explored two complex relationships in the research, firstly, between early maladaptive schemas and the domains of anxiety, and secondly, the relationship between the parental rearing behaviours and the early maladaptive schemas. The display of the multivariate data analysis in turn helped simplify the complexity of this research for the researcher to better grasp these social phenomena (Tredoux et al., 2006). With regard to the internal reliability of the anxiety dimension scale, a Cronbach alpha test was performed.

5.5 Ethical Considerations

In terms of ethics, the only two factors that could have increased participants' vulnerability was susceptibility to anxiety, and thinking about unhappy parenting styles. Regarding the first issue, this is because they were dealing with an anxiety scale and it may have triggered their own anxieties. Regarding the second, being asked questions about parental rearing behaviours and having to quantify their parents behaviours may have evoked unpleasant feelings in the participants. The best ways that the researcher dealt with this was through three steps. Firstly, it was clearly stated from the start what the questionnaires entailed. Secondly, in the participant's letter there was mention of the Student Counselling Centre (SCC) services for the non-clinical sample and SADAG for the clinical sample, for if participants become worried or anxious due to the study. Finally, it was reiterated that the participants can withdraw from the study at any level they choose. Thus the only type of harm that could have occurred is emotional or psychological but the three methods discussed minimised the risks from harm occurring.

Informed consent was required from each participant. Potential participants were provided with an informed consent letter which explained the nature of the study. It also contained the contact information of the researcher and supervisor, should they wish to enquire about the research. It also contained contact information about the SCC and SADAG. The confidentiality of the study was explained in depth to the participants in the consent letter. This included explaining that only averaged information of the three questionnaires would be used, not their specific names and specific answers. See Appendix II for a copy of the informed consent letter. It was hoped that participation in the study would benefit the participants both indirectly and directly. Indirect benefit would be because they were helping further psychological knowledge in an unexplored field. And direct benefit would be because they may have learned something new about themselves regarding their schemas, anxiety, and/or parental rearing behaviours after they have completed the questionnaires.

Confidentiality and anonymity were assured throughout the study as the informed consent was to be completed and returned first, before the actual questionnaires were administered. The participants completed the informed consent forms, emailed them back and then received an electronic copy of the questionnaires to be filled out anonymously. Therefore the researcher cannot link specific tests with specific individuals. On completion of the study, data will not be destroyed, because this is a postgraduate study - all of the research shall be archived in the School of Psychology. If further permission is required either for the researcher to continue the research or if more information is required, contact information about the participants can be obtained from the informed consent forms and then the researcher can contact the participants accordingly.

6. Results

6.1 General Findings

Firstly, the internal reliability of the Anxiety Scale, measured by Cronbach's Alpha, was found to be 0.875. In terms of Pearson's Correlation this size relationship refers to be a high correlation and a strong relationship (Lachenicht, 2002). This suggests that the four dimensional anxiety scale constructed for the research is a reliable measure and that the items of each sub-scale correlated well with each other.

Secondly, although significant results were found for most of the variables, no substantial age effects were found. Low positive correlations emerged between age and Anxiety Scale: Generalized Anxiety ($r = 0.290$, $p < 0.05$) and Social Anxiety ($r = 0.190$, $p < 0.05$) indicating that with increasing age, participants reported themselves experiencing more generalized anxiety and more social anxiety.

Significant yet low positive correlations also emerged between age and YSQ-S: emotional deprivation ($r = 0.400$, $p < 0.01$), social isolation ($r = 0.252$, $p < 0.01$), defectiveness/shame ($r = 0.269$, $p < 0.01$) and subjugation ($r = 0.287$, $p < 0.01$). This indicates that with increasing age the participants reported themselves to be more emotionally deprived, more socially isolated, more internally defective and subjugating their emotions more.

The only significant correlation that emerged between age and perceived parental rearing behaviours was a negative correlation between age and emotional warmth ($r = -0.213$, $p < 0.05$), thus indicating that with increasing age the participants perceived (or remembered) their parents as less emotionally warm.

Thirdly, in most of the variables there were no substantial sex effects. However, a low positive correlation emerged between sex and Anxiety Scale: Trait Anxiety ($r = 0.242, p < 0.01$), and YSQ-S: failure to achieve ($r = 0.300, p < 0.01$), indicating that between males and females there is a slight relationship regarding trait anxiety and “being a failure”. A low negative correlation emerged between sex and YSQ-S: Entitlement ($r = -.0237, p < 0.01$), indicating that there is a negative relationship between the sexes regarding their sense of entitlement.

6.2 Dimensions of anxiety and Early Maladaptive Schemas

Table 1 provides the significant correlations between the four dimensions of anxiety and the 16 EMS. The magnitude of correlations ranged from 0.207 (Test Anxiety and Emotional Deprivation) to 0.602 (Generalized Anxiety and Subjugation).

Regarding Test Anxiety the correlations that were significant (i.e. $p < 0.01$) were Mistrust/Abuse ($r = 0.523, p < 0.01$) and Failure to Achieve ($r = 0.473, p < 0.01$). This finding supports hypothesis one.

For Social Anxiety the correlations that were significant were Mistrust/Abuse ($r = 0.432, p < 0.01$), Social Isolation ($r = 0.531, p < 0.01$), Defectiveness/Shame ($r = 0.533, p < 0.01$), Failure to Achieve ($r = 0.454, p < 0.01$), Insufficient Self-Control ($r = 0.435, p < 0.01$), Social Undesirability ($r = 0.484, p < 0.01$) and Subjugation ($r = 0.541, p < 0.01$). This finding confirms hypothesis two.

For Generalized Anxiety the correlations that were significant were Emotional Deprivation ($r = 0.417, p < 0.01$), Abandonment ($r = 0.406, p < 0.01$), Social Isolation ($r = 0.452, p < 0.01$), Defectiveness/Shame ($r = 0.508, p < 0.01$), Failure to Achieve ($r = 0.523, p < 0.01$), Vulnerability to Harm and Illness ($r = 0.490, p < 0.01$) and Subjugation ($r = 0.602, p < 0.01$). This relationship supports hypothesis three.

For Trait Anxiety the correlations that were significant were Mistrust/Abuse ($r = 0.427, p. < 0.01$), Social Isolation ($r = 0.495, p. < 0.01$), Defectiveness/Shame ($r = 0.525, p. < 0.01$), Failure to Achieve ($r = 0.450, p. < 0.01$), Dependence/Incompetence ($r = 0.420, p. < 0.01$), Vulnerability to Harm ($r = 0.437, p. < 0.01$), Subjugation ($r = 0.563, p. < 0.01$) and Insufficient Self-Control ($r = 0.427, p. < 0.01$).

This finding confirms hypothesis four.

Table 1: Significant correlations between Dimensions of Anxiety and Early Maladaptive Schemas. (N=113) (Appendix VI)

EMS	Test Anxiety		Soc. Anxiety		Gen. Anxiety		Trait Anxiety	
	R	Sig.	R	Sig.	R	Sig.	R	Sig.
ED	.207(**)	0.029	.324(**)	>0.01	.417(**)	>0.01	.383(**)	>0.01
AB	.314(**)	>0.01	.299(**)	>0.01	.406(**)	>0.01	.390(**)	>0.01
MA	.523(**)	>0.01	.423(**)	>0.01	.399(**)	>0.01	.427(**)	>0.01
SI	.283 (**)	0.002	.531(**)	>0.01	.452(**)	>0.01	.495(**)	>0.01
DS	.352(**)	>0.01	.533(**)	>0.01	.508(**)	>0.01	.525(**)	>0.01
FA	.473(**)	>0.01	.454(**)	>0.01	.523(**)	>0.01	.450(**)	>0.01
DI	.311(**)	0.01	.361(**)	>0.01	.420(**)	>0.01	.379(**)	>0.01
VH	.381(**)	>0.01	.373(**)	>0.01	.490(**)	>0.01	.437(**)	>0.01
EM					.195 (*)	0.040		
SB	.371(**)	>0.01	.541(**)	>0.01	.602(**)	>0.01	.563(**)	>0.01
SS	.257(**)	0.006	.278(**)	0.003	.387(**)	>0.01	.371(**)	>0.01
EI	.301(**)	0.001	.319(**)	0.001	.214(*)	0.024	.301(**)	0.001
US	.229 (*)	0.015	.257(**)	0.006	.316(**)	0.001	.242(**)	0.010
ET								
IS	.280(**)	0.003	.435(**)	>0.01	.383(**)	>0.01	.427(**)	>0.01
SU	.231(*)	0.014	.484(**)	>0.01	.309(**)	0.01	.359(**)	>0.01

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

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

6.3 Perceived parental rearing behaviours and Early Maladaptive Schemas

Table 2 provides the significant correlations between the three perceived parental rearing behaviours and the 16 EMS. The magnitude of correlations ranged from – 0.369 (Emotional Warmth and Mistrust/Abuse) to 0.425 (Rejection and Mistrust/Abuse).

The significant correlations between the perceived parental rearing behaviours and the Early Maladaptive Schemas (EMS) were generally of a low correlation (0.2 to 0.4) with a significant but small relationship. This does support hypothesis 5.

Two significant relationships were found to have a moderate correlation and thus substantial relationship. Firstly, the perceived parental rearing behaviour of Rejection correlated significantly with the EMS of Mistrust/Abuse ($r = 0.425, p > 0.01$) and secondly, Rejection was found to significantly correlate with Entitlement ($r = 0.422, p > 0.01$).

Rejection significantly correlated with 14 of the 16 EMS. Emotional deprivation ($r = 0.258, p > 0.05$), Abandonment ($r = 0.302, p > 0.01$), Social Isolation ($r = 0.233, p > 0.05$), Defectiveness/Shame ($r = 0.281, p > 0.01$), Failure to Achieve ($r = 0.213, p > 0.05$), Vulnerability to Harm/Illness ($r = 0.350, p > 0.01$), Subjugation ($r = 0.273, p > 0.01$), Emotional Inhibition ($r = 0.252, p > 0.01$), Unrelenting Standards ($r = 0.257, p > 0.01$), Insufficient Self-Control ($r = 0.397, p > 0.01$), Social Undesirability ($r = 0.278, p > 0.01$). The above correlations were of a low correlation and thus a significant, but small relationship.

The perceived parental rearing behaviour of (over) protection also correlated low with a significant, but small relationship. Firstly, there was a positive low correlation between parental (over) protection and Enmeshment ($r = 0.187, p > 0.05$). Secondly there was a low negative correlation between parental (over) protection and Dependence/Incompetence ($r = -0.236, p > 0.05$).

Finally, the perceived parental rearing behaviour of Emotional Warmth also correlated negatively with eight of the EMS. These correlations were also of a low correlation and a significant, but small relationship.

Emotional deprivation ($r = -0.268, p > 0.01$), Mistrust/Abuse ($r = -0.369, p > 0.01$), Social Isolation ($r = -0.270, p > 0.01$), Defectiveness/Shame ($r = -0.307, p > 0.01$), Failure to Achieve ($r = -0.189, p > 0.01$), Vulnerability to Harm/Illness ($r = -0.298, p > 0.01$) Subjugation ($r = -0.205, p > 0.05$), Self-Sacrifice ($r = -0.184, p > 0.05$).

Table 2: Significant Correlations between Perceived Parental Rearing Behaviours and Early Maladaptive Schemas. (N=113) (Appendix VI)

P.P.R.B	Rejection		(Over)protection		Emotional Warmth	
	R	Sig.	R	Sig.	R	Sig.
ED	.258(**)	>0.01			-.268(**)	>0.01
AB	.302(**)	>0.01				
MA	.425(**)	>0.01			-.369(**)	>0.01
SI	.233 (**)	>0.01			-.270(**)	>0.01
DS	.281(**)	>0.01			-.307(**)	>0.01
FA	.213(*)	>0.05			-.189(*)	>0.05
DI			-.236(**)	>0.01		
VH	.350(**)	>0.01			-.298(**)	>0.01
EM			0.187 (*)	>0.05		
SB	.273(**)	>0.01			-.205(*)	>0.05
SS	.223(*)	>0.05			-.184(*)	>0.05
EI	.252(**)	>0.01				
US	.257(**)	>0.01				
ET	.422(**)	>0.01				
IS	.397(**)	>0.01	-0.197(*)	0.37	-.197(*)	>0.05
SU	.278(**)	>0.01				

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

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

7. Discussion

This research aimed to examine the relationship between 16 early maladaptive schemas (EMS), four dimensions of anxiety and three perceived parental rearing styles. The research conducted found that early maladaptive schemas do correlate with dimensions of anxiety and with domains of perceived parental rearing. Moreover, this research aimed to investigate which of the specific EMS correlated with each of the specific dimensions of anxiety, and to further investigate the relationship between EMS and the domains of perceived parental rearing styles. A further finding from the research regarding the psychometric properties of the Anxiety Scale constructed for the research was found - it was found to possess high internal reliability.

7.1 Internal Reliability

The Anxiety Scale was constructed for the researcher's original research so it was necessary then, and again now, to investigate the scale's psychometric properties. Changes were made to the original scale after the first research. In the original research the internal reliability of the scale was found to be 0.787 (Costello, 2009). Upon further investigation it was found that Question 18 (a Generalized Anxiety question) was a problem question. It was found that the Cronbach's alpha would only be noticeably increased if Question 18 was removed (from 0.787 to 0.813) (Costello. 2009). For the current research the researcher reverse coded question 18 and the internal reliability was found to be of a high correlation and thus a strong relationship.

As the internal reliability of the Anxiety Scale was found to be high, this suggests that the scale is a reliable measure of anxiety. This is important as there is no multi-dimensional anxiety scale created and tested in a South African context. The scale that was constructed reliably measures generalized anxiety, social anxiety, test anxiety and trait anxiety.

7.2 Six higher order domains of EMS

This study hypothesised which of the six higher order domains of the Early Maladaptive Schemas (EMS) would have a direct relationship with each of the four anxiety dimensions.

Firstly, the findings for Test anxiety were very specific to the nature of test-taking, which opposed the findings for the other dimensions of anxiety. The only two higher order domains that correlated with test anxiety were Undesirability and Instability/ Disconnection. Undesirability was hypothesised as having a relationship with test anxiety as one of the specific EMS within the domain was Failure to Achieve. This would lead one to feel that they are insignificant and/or undesirable in comparison to others and cannot perform as well as others academically. This was shown to be correct and there was a significant relationship between the two.

With regard to the Instability/ Disconnection higher order domain there may be a feeling of rejection, that one's needs will not be adequately met by significant others should they not perform academically. This could be explained by the likelihood that performing well in tests/exams could win the support and approval of others, thus in turn providing the participant with stability, security, nurturance and safety as a result of the attention given for good test results. The converse also could apply, viz. the fear that others will abandon them or abuse them should they not perform well.

Social anxiety was hypothesised to correlate with Undesirability and Restricted Self-Expression. These hypotheses were supported by the results, in terms of feeling undesirable physically, socially or because of personality. The finding regarding Undesirability may be due to the fact that the tenets of the domain are greatly focused on the characteristics of social anxiety, implying a measure of overlap between the two variables. Of the four EMS for the domain of

Undesirability (Defectiveness/Shame, Social Undesirability, Failure to Achieve, and Social Isolation), all four had high correlations with social anxiety.

Social anxiety entails the “extreme, enduring, irrational fear and avoidance of social or performance situations” (Barlow & Durand, 2005, p. G-14). This directly links to the second higher order function which correlated highly with social anxiety, that of Restricted Self-Expression. With regard to Restricted Self-Expression there is an excessive suppression of emotions so as not to act impulsively and embarrass one socially; also that one’s preference or opinions are inferior in comparison to others. This implies that one should not say anything at all that might lead to embarrassment, either by speaking out one’s preferences and being assertive or by not controlling and restricting one’s emotions.

It was hypothesised that Generalized anxiety would be linked with the Impaired Limits schema domain, because of the difficulty in controlling excessive worry. However, the results of the previous research did not support this hypothesis (Costello, 2009). A possible reason for this could be the confusion pertaining to what the higher order domain of Impaired Limits entailed. The Impaired Limits EMS domain refers to a lack of self-discipline by setting emotional and interpersonal limits as too generous. This does not have any link to a lack of control of excessive worry, but rather control over one’s actions and one’s relationships.

Generalized anxiety centres on developing a sense that important events in one’s life may be uncontrollable and potentially dangerous (Barlow & Durand, 2005), thus leading to excessive worry as one is excessively worried about what may go wrong and continually catastrophizing. Therefore in the current research it was hypothesised that generalized anxiety would correlate best with the Instability/Disconnection domain as the excessive worry may manifest itself in various aspects of an individual’s life. In the Instability/Disconnection domain

there is worry that relationships will not provide security, nurturance or stability. In this domain the “other” is given much negative rumination, in that the EMS all pertain to the other abandoning, the other abusing or mistrusting, and the other emotionally depriving. There is excessive worry and concern about actions that are out of control of the individual and could potentially harm the individual.

The current research also found that generalized anxiety correlated with the Impaired Autonomy domain; here the excessive worry is fixated on functioning independently of the “other”. The Undesirability domain centres on a person feeling that they are fundamentally inadequate in comparison, albeit physically, socially, moral integrity, personality, or intellectually. The excessive worry of generalized anxiety could focus on one of these aspects. Finally, the higher order domain of Restricted Self-Expression was also found to correlate. This refers to the excessive suppression or restriction of emotion because of fear of negative consequences from expression. This suggests the worry expressed in generalized anxiety would centre on the belief that negative consequences would ensue if one truly expressed themselves emotionally.

Finally, it was hypothesised that a relationship would exist between trait anxiety and the higher order functions of Impaired Autonomy. This was hypothesised because this domain entails the functioning of one’s everyday life, whether cognitively, emotionally or physiologically. Trait anxiety refers to the broad personality predisposition rather than being a state, or symptom of some other disorder. This therefore was correctly hypothesised to link with Impaired Autonomy as the individual could be anxious on normal matters of everyday life, and due to the pervasive nature of trait anxiety affecting the individual in all aspects of life.

The findings also showed that Instability/Disconnection had a very significant correlation with trait anxiety. Trait anxiety also correlated with Undesirability and Restricted Self-Expression. In order for anxiety to be a personality trait the

proneness to anxiety needs to manifest itself constantly in the individual's behaviour and in the frequency with which an individual experiences anxiety over time. Further, the more enduring a trait is, the more encompassing it is likely to be of different EMS. As a trait is more pervasive than a dimension, it is also likely to be more severe in terms of underlying negative cognitions. Therefore it is no surprise that trait anxiety had the most significant specific EMS in each of the significant higher order domains which correlated with trait anxiety.

Interestingly, the higher order domain of Impaired Limits and its EMS did not have any significant results in this study. This may be due to the nature of anxiety, which predominately centres on misinterpreting cues from one's environment with a subsequent behavioural response of avoidance and controlling one's life to avoid the anxiety. Therefore people with higher dimensions of anxiety would certainly not have the higher order domain of having impaired limits, implying lack of control and self-discipline. In research done by Muris (2005) this higher order domain was found to correlate with depression, disruptive behaviours and eating disorders in adolescents. This may suggest that those forms of psychopathology are a function of development of the Early Maladaptive Schema's higher order domains of Impaired Limits. Alternatively it may be due to the nature of the adolescent sample, as adolescents are in a developmental stage where feelings of grandiosity and entitlement and feelings of a lack of sufficient self-control/ discipline are the norm.

7.3 Specific EMS and the four dimensions of anxiety

As mentioned in the review of literature, from the six higher order domains there are a total of 16 EMS. The findings regarding which of the specific EMS has a relationship with each of the four dimensions of anxiety proves to be even more interesting than comparing the relationship between the six higher order domains and the four dimensions.

7.3.1 Test anxiety

As previously mentioned, test anxiety was hypothesised to correlate with the more performance-based or evaluative EMS. But test anxiety also correlated moderately with the Mistrust/Abuse EMS. This EMS involves the perception that others will take advantage of one and cannot be trusted (Young, 1999). It also involves the sense of always being cheated and always “getting the short end of the stick” (Young et al., 2003). In an academically competitive environment like university this may cause one to develop a sense that tests and exams may involve the mistrust of fellow students or even lecturers. It could also be related to the belief that tests and exams give other students further means to manipulate and “be better” than an individual who holds this EMS.

Young and associates (2003) further state that this particular EMS involves a perception that harm (be it emotional humiliation) is intentional, and the harm is unjustified. If the individual believes that others are intentionally trying to humiliate them, they may believe that other students are going to achieve this through attaining better marks, or that the lecturers will ensure this by awarding low marks. This results in anxiety regarding writing tests and exams. A final explanation for this relationship could be that individuals with this EMS may feel the need to prove themselves and only then will others approve of them, rather than abuse them. If that is the case, an individual in a university setting may think that they are better able to prove themselves to others by means of attaining good marks. Therefore, anxiety may emerge when it comes to tests and exams because of the activation of this schema as a fear that poor results may lead to humiliation or in extreme terms, abuse.

The second EMS correlated with test anxiety is Failure to Achieve. This correlation between Failure to Achieve and test anxiety supports hypothesis four. This EMS is likely to be activated in an educational context. The individual believes that they are inadequate relative to their peers, especially in areas of achievement (Schmidt et al., 1995). They feel that they are not “good enough”

academically, and that they are stupid, inept or lower in status in comparison to others. Ultimately, they believe they are going to fail (Young et al., 2003). This EMS needs little explanation, as it is essentially synonymous with test anxiety. The schema-based fear that one is always destined to fail rather than to achieve and an inadequacy compared to others, would naturally be triggered around exam time causing great test anxiety.

7.3.2 Social anxiety

Social anxiety was found to significantly correlate with seven EMS. Each of the correlated EMS pertained directly to aspects of social anxiety, and could explain why one could develop social anxiety when one has such thoughts and views about the world and others, i.e. the following six EMS. The high number of EMS that correlated with social anxiety may be explained by the nature of the sample. The sample consisted of young university students aged 18 years and older coming into adulthood and trying to understand themselves as well as their peers. They may develop a sense of social anxiety at having to assert one socially and learn about oneself and others through social interactions. This may be exacerbated or possibly triggered by the predominant early maladaptive schema that an individual has in operation.

The first to correlate was the EMS of Mistrust/abuse. This schema is where one perceives others as abusive, humiliating and manipulative (Young, 1999). This perception of the world may cause one to be more susceptible to a social anxiety as there is apprehension that one may be humiliated or judged in social interactions, which in turn reinforces their belief that others are abusive and hurtful. The consequences of such a combination of schema and anxiety may result in one being social isolated and withdrawn.

Social Isolation was the second EMS found to correlate with social anxiety. Here an individual develops the belief that they are socially isolated from the world

because they are different from other people and have a sense of not belonging (Young et al., 2003). An individual with this EMS would be more susceptible to social anxiety as social interpersonal interactions (or even the thoughts of social interactions) would activate the feelings of being so different that they do not belong.

An interesting relationship found was between the Defectiveness/Shame EMS and social anxiety. Here an individual believes that they are inferior and imperfect and outwardly unattractive to others - that they are fundamentally defective (Schmidt et al., 1995). Such an extreme negative view of oneself could progressively facilitate the development of being socially anxious. Due to the perceived performative nature of social anxiety coupled with the belief that one is defective the result would be an individual feeling evaluated for being “inferior, defective, imperfect” in social situations.

Failure to Achieve was also found to have a relationship with social anxiety. Here the individual believes that they are destined to fail as they believe that they are incapable of performing well relative to others (Young et al., 2003). As the nature of this schema already has an element of comparison to the other it was hypothesised that it would correlate with the comparative, evaluative nature of social anxiety. The individual with a Failure to Achieve EMS will already be hypersensitive to evaluative, graded or performative situations due to the fact that at university being marked or evaluated is part of the process. However, with regard to social anxiety specifically, an individual with this EMS may have preconceived notions that they are going to perform “poorly” and will subsequently be judged socially for it. An interesting notion that pertains to this EMS, especially in an academic setting such as university, is the notion of self-fulfilling prophecy - that because an individual believes that they are going to perform poorly they may unintentionally cognitively set themselves up for failure which in turn would validate the notion that “I’m destined to fail relative to everyone else”.

A further significant relationship with social anxiety was Subjugation. This entails the excessive submitting of control because one feels coerced. This EMS further involves submitting in order to avoid anger, retaliation or humiliation (Young et al., 2003). A final important aspect of this EMS is that one feels their own needs, desires, opinions and feelings are not valid or important in comparison to others (Schmidt et al., 1995). The reason for the relationship between this EMS and social anxiety could revolve around the belief that one is insignificant in comparison to others. Additionally, it could be easier to comply in a social setting than speaking out against a group. This is especially relevant at university where classes may be discussion-based, even taking the form of a debate. The EMS also involves the suppression of emotions. This could relate to social anxiety in terms of fear of embarrassment for revealing one's emotions socially. Social anxiety centres on the fear of evaluation of one's behaviour or person by others (Barlow & Durand, 2005). So an individual would rather subjugate needs and emotions out of fear of possibly being evaluated or judged by others.

A behaviour that accompanies social anxiety is the "marked avoidance of situations and/or people associated with fear, anxiety or panic attacks" (Barlow & Durand, 2005, p.166). This could be generalised to self-expression in terms of subjugation of one's needs and emotions.

The final EMS which correlated with social anxiety was the Social Undesirability EMS. Here an individual believes that they are different and thus isolated due to an outwardly undesirable feature (Schmidt, et al., 1995). This entails characteristics such as believing one is physically ugly or that socially one is boring and dull.

A primary criterion for the onset of social anxiety is that there must be a generalised psychological vulnerability (Barlow & Durand, 2005). In terms of this EMS one could feel evaluated on physical features or social characteristics

because the individual has always believed that those are their undesirable areas. When put into a social situation their anxiety could have been sparked by activation of their negative belief about being socially undesirable, and so believed to be judged or evaluated in social situations.

Attending university constantly places individuals in social situations. These situations include being in lectures where they are asked to answer questions, during tutorials where they have group work with people they do not know or even between lectures at the university café. The social situations of university may trigger the schema-based fear of constantly being evaluated in terms of the features or characteristics that they feel make them socially undesirable.

It may be possible that these EMS which have correlated with Social anxiety may not actually be independent variables, but rather facets of social anxiety: mistrust, social isolation, feelings of defectiveness, a sense of failure to achieve, subjugation, and feeling socially undesirable.

7.3.3 Generalized anxiety

There were seven EMS that were found to significantly correlate with generalized anxiety. Generalized anxiety is characterised by excessive worry and the inability to control that worry (Barlow & Durand, 2005). It is the specific focus of that worry which became evident in the researcher's previous research (Costello, 2009) as well as this research. The first EMS that was found to have a relationship with generalized anxiety was Emotional Deprivation. Regarding this schema, the individual believes that their primary emotional needs will not be met by others (Schmidt et al., 2003). When transitioning to adulthood adolescents need to learn to view their identity as separate from their parents; they are learning to establish themselves and their identity as individuals. This process may evoke anxiety within the young adult as they learn that their parents are no longer responsible for their emotional well-being (Barlow & Durand, 2005). The generalized anxiety

may centre on establishing themselves and understanding themselves emotionally, as separate from their parents, thus resulting in excessive worry about whether or not others will be able to provide emotionally for them, as their parents did.

Abandonment was also found to have a relationship with generalized anxiety. Here the individual believes that there is a risk/likelihood of instability and unreliability of support and connection from significant individuals in one's life (Young, 1999). The focus of the worry here is that significant others will leave or abandon the individual in favour of someone better. So the focus centres on relationships. There is excessive worry about maintaining the relationships in one's life. There is also a focus on the emotional support and protection that significant others will provide. The focus of the individual's excessive worry is that others will not be reliable in terms of providing that support. So when the individual needs the significant other they worry that the significant other will not be there to provide the necessary strength that the individual expects of them.

The pattern of excessive worry in generalized anxiety, like in social anxiety, stems from a generalized psychological preposition (Barlow & Durand, 2005), showing that the individual believes that people are not reliable/stable/or even able to maintain the level of support, connection or security that the individual needs, thus confirming that one aspect of this generalized anxiety is excessive worry about the level of stability and reliability that others are able to provide.

Also, this EMS could be activated for similar reasons to the EMS above, in that relationships are an important aspect of any individual's life, more so for late adolescents or young adults making that transition to adulthood, which is likely to be true of the sample of this research. For an individual who developed the Abandonment schema, whose thoughts and perceptions mainly pertain to the fear of being abandoned, it is very likely that this schema would be activated at the university period of an individual's life. As previously mentioned, young adults

are learning about themselves and about themselves in relation to their peers. It is likely that at this time they will be engaging in numerous relationships, socially and romantically. Therefore it is likely that individuals with the EMS of Abandonment may be susceptible to excessive worry about being abandoned, and worry that others will not be able to provide the emotional support and protection that they believe they need.

The third EMS that was found to be associated with generalized anxiety was Social Isolation. As mentioned above, if an individual believes that they are socially isolated because they are too different, this schema would probably be activated in the very social world of university. The individual would be forced to be social and this may result in excessive worry about being different and about being socially isolated. Having the negative view of oneself that one is socially isolated at a time when others are all constantly interacting socially (i.e. at university) must be very disabling for an individual with this EMS. Therefore it is likely that an individual with this EMS would be more vulnerable to generalized anxiety, especially if the EMS were triggered by the social world of university.

The findings also showed that the Failure to Achieve EMS also was found to have a relationship with generalized anxiety. This finding suggests that the fear of failure to achieve is an important component of generalized anxiety. This is not a surprising finding in a university context, where achievement is a common expectation, and there is constant evaluation of academic progress. Succeeding is a very important aspect of university because failing comes with many repercussions, such as letting oneself and family down, wasting money and blocking future career prospects. With many students at university, all potentially competitors, an individual with this EMS may feel academically inadequate in relation to the other students and thus constantly and uncontrollably worry about failing (Young et al., 2003).

The fifth relationship between EMS and generalized anxiety was with the EMS of Defectiveness/Shame. Again, here an individual believes that they are inferior, fundamentally defective and therefore unlovable (Schmidt et al., 1995). This extreme negative view of oneself could possibly be exacerbated if one continually worries themselves about comparing with fellow students academically, physically, socially or emotionally.

It was found that Vulnerability to Harm or Illness correlated with generalized anxiety. This may have three components. Firstly, there is fear of medical catastrophe such as heart attacks or HIV/AIDS (Young et al., 2003). Secondly, there is fear of emotional catastrophe such as “going crazy” (Young et al., 2003). Finally, there is fear of external catastrophe which includes disasters and catastrophic events that are outside one’s control (Young et al., 2003). In terms of generalized anxiety, the focus of worry is that harm and illness may strike. The individual is preoccupied with the “impending doom” that might befall them. This has a direct link to the notion that there is a high sensitivity towards the world being dangerous and that one cannot cope or control that (Barlow & Durand, 2005). These elements appear to be important recurrent life issues that university students are learning to deal with on a daily basis: the transmission of HIV/AIDS, establishing one’s self emotionally and the reality of growing up, transitioning to adulthood which comes with all its own challenges, stresses and worries. For an individual with the Vulnerability to Harm/Illness schema there is a hypersensitivity to these issues which, being so ever recurrent at university may trigger a generalized anxiety about these issues. The notion of generalized anxiety may be linked to the notion of uncertainty as individuals may be so uncertain about multiple domains of their lives that they begin to worry excessively about those domains.

The final EMS that has a link with generalized anxiety was Subjugation, which refers to excessively surrendering control to others due to coercion (Young et al., 2003). As excessive worry is part of generalized anxiety; specifically that one is

unable to control aspects of their life (Barlow & Durand, 2005). It is interesting that there would be a link with the EMS that entails suppressing one's control regarding their needs and emotions. However, the focus of the worry may centre on the possibility of having to actually subjugate one's needs and emotions. An individual may be worried about having to relinquish their needs and emotions to another. Thus, the source of worry then lies in the beliefs about having to subjugate their desires, preferences, decisions or emotions.

A further explanation of this relationship could be that the individual may worry excessively about subjugating in order to avoid abandonment. Fear of abandonment is a noted reason for submitting one's emotions and needs in terms of this EMS (Young, 1999). The individual worries about opposing significant others in terms of needs and emotions so they would rather subjugate their own emotions and needs to their significant other, which in turn could be the focus of the extreme worry.

7.3.4 Trait anxiety

Trait anxiety had the most significant correlations with EMS, correlating moderately with eight EMS. This is expected, as trait anxiety is defined as an "enduring personality characteristic that would predispose persons to state anxiety at times of stress" (Kennedy et al., 2001, p.264). This means that because it is a stable personality trait, the individual is more susceptible in more situations to misinterpret a situation as stressful. As previously mentioned, it differs from an emotional state of anxiety because state anxiety is an emotional response at any particular moment, whereas a personality trait is believed to be a constant predisposition (Kennedy et al., 2001). Having mentioned that, it is interesting that the significant relationships of trait anxiety and the EMS which correlated had the highest correlations, bar Subjugation and generalized anxiety.

It is also interesting that the five highest EMS with substantial relationships with trait anxiety all feature in the other domains of anxiety viz. test, social and

especially generalized anxiety. The findings show that underlying the greatest trait of anxiety, as described by Spielberger, is a latent schema of Subjugation. Here other people's emotional needs and desires are seen as having more value than the unique needs and feelings of the individual (Young et al., 2003). This may lead to an individual constantly suppressing needs and emotions as part of their personality, manifesting itself in constant compliance and feeling inferior and not as worthy as others.

The second highest EMS associated with trait anxiety was Defectiveness/Shame, which is based on the belief that one is defective and fundamentally unlovable (Young et al., 2003). So pervasive is this belief that it becomes a core feature of trait anxiety, like generalized anxiety. So they may be the same construct.

Social Isolation was the third highest relationship to be found with trait anxiety. Here an individual believes that they are so different from others that they do not belong. The individual's trait anxiety is so preoccupied with possibly being isolated for being "too different" and that they may never belong.

Trait anxiety was also found to have a relationship with Failure to Achieve. This revolves around believing one is not adequate enough in comparison to others. This may suggest that underlying trait anxiety, the individual enduringly sees themselves as inferior, destined to fail and not as good as others.

Finally, Vulnerability to Harm is the EMS pertaining to the belief that some external or internal disaster may occur. This correlation with trait anxiety may manifest itself as an individual who is always anxious and pessimistic that danger is imminent. This may pertain to Beck's notion of incorrect information processing in anxiety, that an individual is continually misinterpreting stimuli as dangerous (Barlow, 2004). Regarding this schema, it may have been so recurrent and

pervasive for the individual that it became a personality trait to constantly be “on the look-out” for danger which may befall them, or possibly vice versa.

In conclusion it is worthy to note that these highest correlations for trait anxiety were all found to be the highest finding for generalized anxiety. It is possible that trait anxiety and generalized anxiety are similar or overlapping phenomena. There has been thought in the revision of DSM-IV to DSM-V that generalized anxiety disorder should be treated as a pervasive personality trait or disorder (i.e. Axis II), rather than an Axis-I state. It is also interesting to note that social and test are, according to Spielberger, two types of the same phenomena, that of state anxiety, as they are activated by specific states i.e. writing a test or socialising with a crowd.

This research has found that there is a negative cognitive dimension to anxiety and more specifically that specific early maladaptive cognitive schemas correlate with the four specific patterns of anxiety. This proved that a student’s early maladaptive schemas may, as hypothesised, affect the type of anxiety they develop as well as their susceptibility to the anxiety dimensions in terms of what early maladaptive schema they have in operation which affects their cognitions. What is also important to note is that it appears that the university setting activates certain EMS, which were found to be constant across all four patterns of anxiety, those of Failure to Achieve, Social Isolation, Defectiveness/Shame, and Subjugation.

7.4. Early Maladaptive Schemas and Perceived Parental Rearing Behaviours

The findings regarding EMS and the three perceived parental rearing behaviours (emotional warmth, rejection, and over-protection) were found to support the researcher’s hypothesis; however the distribution of results were not as expected. Generally, the significant correlations between the two variables were low with a small but definite relationship.

Previous research by Muris (2006) found much stronger correlations between early maladaptive schemas and perceived parental rearing styles. However, this may be due to the research sample. Muris (2006) made use of an adolescent sample where participants were constantly exposed to discipline by their parents whereas in this research the participants were young adults transitioning to adulthood, so less under the influence of their parents. Therefore, the participants of this study may not have reported or perceived their parents rearing behaviours as especially negative or positive due to their later developmental stage

Generally it was found that higher levels of rejection and (over) protection and, lower levels of emotional warmth were related to higher EMS scores. It was found that the perceived parental rearing style of Rejection correlated with 14 of the 16 EMS, of which, two EMS (Mistrust/Abuse and, Entitlement) were found to have a significant moderate correlation and thus substantial relationship.

The EMS of Mistrust/Abuse pertains to the belief that one will be abused or mistreated by others. Therefore the more likely an individual is to perceive their parents as rejecting the more likely they are to develop the schema that others will mistreat them and others cannot be trusted, or possibly vice versa. As suggested in EMS literature, one's early childhood relationships will be played out in later relationships throughout life (Young et al., 2003). Young and associates (2003) hypothesised about family of origin for each of the six higher order domains. Regarding Instability and Disconnection (under which Mistrust/Abuse falls) the typical family of origin is detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive. Their hypothesis was confirmed by this research, indicating that a rejecting and/or abusive family may lead to the development of the Mistrust/Abuse schema.

Regarding the EMS of Entitlement, this schema was not featured as a significant finding in Costello (2009). This EMS is the belief that one is superior to others

and therefore can act without regard for others (Young, 1999). This interesting finding of the significant moderate correlation between Rejection and Entitlement suggests that the more rejecting an individual perceives their parent/s to be, the more the individual believes that they are entitled. This type of thinking or schema has serious implications for the personality development of the individual, because if they continue through life believing that they are entitled because their family was rejecting, there is no telling to what end their acting in disregard of others may end. Young and associates (2003) hypothesised that the Impaired Limits higher order domain (under which Entitlement falls) typical family of origin is characterised by permissiveness, and a lack of direction or interest. It therefore does follow that an individual may perceive their parents as rejecting if they do not help provide the child with a sense of direction or do not show an interest in the child and have a sense of permissiveness.

Due to the nature of early maladaptive schemas and the unmet core emotional needs in childhood, it was expected that the perceived parental rearing behaviour of Rejecting would be found to have a relationship with most of the EMS, finding that 14 of the 16 EMS significantly correlated. Interestingly, the two that did not correlate with Rejecting but were found to have a small but definite relationship with (Over) Protection, were Enmeshment and Dependence/Incompetence. Enmeshment is the EMS where there is excessive emotional involvement with others due to the belief that at least one of the enmeshed individuals cannot survive or be happy without the constant support of the other (Schmidt et al., 1995). The EMS of Dependence/Incompetence is the belief that one is unable to independently or competently manage everyday responsibilities (Young et al., 2003). Both these EMS fall under the higher order domain of Impaired Limits, where the typical family of origin is hypothesised to be overinvolved, overprotective and enmeshed (Young et al., 2003). Therefore the more overly protective an individual perceives their parent/s to be, the more likely they are to be enmeshed with their parents, and the more likely they are to depend upon

them out of belief of incompetence, thus respectively developing the Enmeshment and Dependence/Incompetence EMS.

The perceived parental rearing behaviour of Emotional Warmth was found to significantly negatively correlate with eight of the EMS, albeit it a low correlation with a small but definite relationship. It was expected that this parental style would negatively correlate with more of the EMS. The same four EMS that were found to moderately correlate across all four of the anxiety patterns negatively correlated with this perceived parental rearing behaviour. These included Failure to Achieve, Social Isolation, Defectiveness/Shame, and Subjugation. This result indicates that the more emotionally warm individuals perceive their parent/s to be the less likely they are to develop these EMS, and vice versa.

Therefore if those four EMS correlated moderately with the patterns of anxiety, what may be deduced is that the participants of this sample did not view their parents as emotionally warm. However, there seems to be ambivalence as they do not extensively view their parents as rejecting either. This may hint at the notion that the researcher discussed earlier, that the participants are at a time in their lives where they are not under the influence of their parents but rather trying to understand themselves, which may in turn result in an ambivalence towards their parents, albeit even perceived parental rearing behaviours.

8. Concluding Remarks

8.1 Limitations of the research

The first limitation of this study was the sample size. Sample size is a very important factor when analysing the internal reliability of a test. The larger, thus the more representative, the sample size the more accurate the Cronbach's alpha (Finchilescu, 2002). This study's sample size was 113 and this may have been a hindrance when the researcher measured the internal reliability of the Anxiety scale. When measuring reliability, another factor that may affect the limitations is the number of items in a scale. The more items in a scale, the more reliable the scale (Finchilescu, 2002). The Anxiety scale only had 25 items across four subscales which may limit the findings.

A further imitation regarding the sample is not comparing a clinical sample with a non-clinical sample. Not only did the researcher intend having a larger sample of 200 participants but also comparing the two samples would allow for a more in-depth analysis and contrasting of the variables especially regarding the dimensions of anxiety and testing out the Anxiety Scale on a clinical anxiety sample.

An important limitation to take into account regarding this study was the issue of social desirability. The participants may have answered, in particular on the anxiety scale, in what they believed to be a socially desirable manner thus, giving high or low scores on items because they believed that is what the researcher wanted or because they wanted to stand out or not stand out.

A further limitation of this study was that the researcher could not tell the direction of causation due to the correlational nature of the study. Do perceived parental rearing behaviours lead to schema development or vice versa? Do early maladaptive schemas play a role in susceptibility to anxiety or vice versa?

A final possible limitation of this study is the notion that cognitive schemas may not in actual fact be separate variables from the negative cognitions of anxiety. In essence the research may have measured the same variable and thus accounted for the overlap in terms of test and social anxiety and the tenets and the correlations with the EMS. This too could explain the vast overlap between generalized anxiety and trait anxiety and the EMS, that generalized anxiety is actually just as pervasive in an individual's life as the personality traits of trait anxiety because they may be the same variable.

8.2 Future research

Future research using this methodology is possible and desirable; there are several areas that this researcher would like to investigate. Possible future research could investigate which domains of perceived parental rearing behaviours are associated with which patterns of anxiety, thus examining the correlation between the specific relationship between perceived parental rearing behaviours and the patterns of anxiety. Additionally, future research could investigate what this study intended to investigate - the comparisons between a clinical and non-clinical sample.

Regarding the Anxiety Scale, interesting future research could refine it further then administer it to a larger sample and a study focusing primarily on the psychometric properties could be investigated. One could also control for neuroticism which is said to be the basis of anxiety. This could be done using Eysenck's introverted-neuroticism scale. One could also add more sections to the Anxiety Scale, such as obsessive-compulsive dimensions or post-traumatic stress dimensions as these are also believed to be 'state' forms of anxiety according to Spielberger to examine the relationship with EMS. Finally, future research could include a longitudinal study to examine cause-effect between EMS and dimensions of anxiety. Future research could also investigate the

internal reliability and psychometric properties of the Young Schema Questionnaire and/or the EMBU in a South African setting.

8.3 Conclusion

In conclusion, this study has found that early maladaptive schemas correlate with specific patterns of anxiety. This shows that one's early maladaptive schemas may, as hypothesised, predispose to affect the type of anxiety as well as one's susceptibility to anxiety. This has major implications for therapy in terms of understanding, and working on one's negative schemas may relieve an individual of the symptoms of the state types of anxiety. However, in terms of trait anxiety this may be more challenging as the individual has adopted the negative cognitions as personality traits which are likely to be more rigid and pervasive but can also be changed if the underlying early maladaptive schema is found.

This study also found that the university setting activates certain early maladaptive schemas, which were found to be constant across all four patterns of anxiety, those of Failure to Achieve, Social Isolation, Defectiveness/Shame, and Subjugation.

Furthermore, it was found that early maladaptive schemas correlated with perceived parental rearing styles; that the higher the levels of perceived rejection and over-protection and the lower the perceived parental emotional warmth the more pervasive the early maladaptive schema. This supported Young and associates (2003) notion that early maladaptive schemas are formed and exacerbated by core unmet emotional needs in childhood.

Finally, this study also has implications in terms of how anxiety is assessed in a South African context. The researcher and supervisor previously constructed a reliable anxiety scale measuring test anxiety, social anxiety, generalized anxiety and trait anxiety which was proved to psychometrically be a reliable measure again in this study.

9. References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, fourth edition, text revision (DSM-IV-TR)*. Washington.
- Arrindell, W. A., Emmelkamp, P. M. G., Monsma, A., & Brillman, E. (1983). The role of perceived parental rearing practices in the aetiology of phobic disorders: A controlled study. *British Journal of Psychiatry*, *143*, 183-187.
- Arrindell, W.A., Sanavio, E., Aguilar, G., Sica, C., Hatzichristou, C., Eisemann, M., Recinos, L.A., Gaszner, P., Peter, M., Battagliese, G., Kállai, J., & van der Ende, J. (1999). The development of a short form of the EMBU: Its appraisal with students in Greece, Guatemala, Hungary, and Italy. *Personality and Individual Differences*, *27*, 613–628.
- Arrindell, W.A., Ritcher, J., Eisemann, M., Garling, T., Ryden, O., Hansson, S. B., Kasielke, E., Frindite, W., Gillholm, R., & Gustafsson, M. (2001). The short EMBU in East Germany and Sweden: A cross-national factorial validity extension. *Scandinavian Journal of Psychology* *42*, 157-160.
- Arrindell, W.A., Akkerman, A., Bagés, N., Feldman, L., Caballo, V.E., Oei, T.P.S., Torres, B., Canalda, G., Castro, J., Montgomery I., Davis, M., Calvo, M.G., Kenardy, J.A., Palenzuela, D.L, Richards, J.C., Leong, C.C., Simón, M.A, & Zaldívar, F. (2005). The Short-EMBU in Australia, Spain, and Venezuela: Factorial Invariance, and Associations with Sex Roles, Self-Esteem, and Eysenckian Personality Dimensions. *European Journal Psychological Assessment*, *21*(1), 56-66.
- Barlow, D. H. (2004). *Anxiety and its disorders: the nature and treatment of anxiety and panic*. (2nd ed.). New York: The Guilford Press.
- Barlow, D.H., & Durand, (2005). *Abnormal Psychology: An integrative approach*. (4th ed.). Belmont: Thomson/Wadsworth.
- Blankstein, K. R. (1976). Relationships between Spielberger trait anxiety and Lykken social and physical trait anxiety. *Journal of Clinical Psychology*, *32* (4), 781-782.

- Castro, J., Toro, J., Van der Ende, J., & Arrindell, W. A. (1993). Exploring the feasibility of assessing perceived parental rearing styles in Spanish children with the EMBU. *International Journal of Social Psychiatry*, 39, 47-57.
- Chorpita, B. F., & Barlow, D.H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin*, 124(1), 3-21.
- Costello, D.J. (2009). *Examining the relationship between specific cognitive schemas and dimensions of anxiety*. Unpublished Psychology Honours research report: University of KwaZulu-Natal, Pietermaritzburg.
- Cukor, D. (2004). The relation between parenting patterns, childhood events, and cognitive schema. *Dissertation Abstracts International: Section B: Science and Engineering*, 65, 432.
- Durrheim, K. (2006). Basic Qualitative Analysis. In M. Terre Blanche, K. Durrheim, & D. Painter. (Eds.), *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press
- Durrheim, K. (2006). Research Design. In M. Terre Blanche, K. Durrheim, & D. Painter. (Eds.), *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press
- Durrheim, K., & Painter, D. (2006). Collecting quantitative data: sampling and measuring. In M. Terre Blanche, K. Durrheim, & D. Painter.(Eds.), *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press.
- Finchilescu, G. (2002). Measurements. In C. Tredoux & K. Durrheim (Eds.), *Numbers, hypotheses & conclusions: A course in statistics for the social sciences*. Cape Town: UCT Press.
- Gruner, K., Muris, P., & Merckelbach, H. (1999). The relationship between anxious rearing behaviors and anxiety disorders symptomatology in normal children. *Journal of Behavior Therapy and Experimental Psychiatry*, 30, 27-35.

- Kennedy, B. L., Schwab, J. J., Morris, R. L., & Beldia, G. (2001). Assessment of state and trait anxiety in subjects with anxiety and depressive disorders. *Psychiatric Quarterly*, 72 (3), 263-276.
- Lachenicht, L. (2002). Correlation. In C. Tredoux & K. Durrheim (Eds.), *Numbers, hypotheses & conclusions: A course in statistics for the social sciences*. Cape Town: UCT Press.
- Mcleod, B.D., Wood, J.J., & Weisz, J.R. (2006). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review*, 27, 155–172.
- Muris, P. (2006). Maladaptive Schemas in non-clinical adolescents: Relations to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. *Clinical Psychology and psychotherapy* 13, 405-413.
- Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review*, 17, 47-67.
- Riso, L.P., du Toit, P.L, Stein, D.J., & Young, J.E. (2007). *Cognitive schemas and core beliefs in psychological problems: A scientist-practitioner guide*. Washington, DC: American Psychological Association.
- Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The schema questionnaire: investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognitive Therapy and Research*, 19 (3), 295-321.
- Starcevic, V., & Berle, D. (2006). Cognitive specificity of anxiety disorders: a review of selected key constructs. *Depression and Anxiety*, 23, 51-61.
- Stein, D. J., Seedat, S., Herman, A., Moormal, H., Heeringa, S., Kessler. G., & Williams, D. R. (2008). Lifetime prevalence of psychiatric disorders in South Africa. *The British Journal of Psychiatry*, 192, 112-117.
- Terre Blanche, M., & Durrheim, K. (2006). Histories of the present: social science research in context. . In M. Terre Blanche, K. Durrheim, & D. Painter. (Eds.), *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press.

- Tredoux, C., Pretorius, T., & Steel, H. (2006) Multivariate data analysis. . In M. Terre Blanche, K. Durrheim, & D. Painter. (Eds.), *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press
- Trip. S. (2006). The Romanian version of the Young Schema Questionnaire-Short form 3 (YSQ-S3). *Journal of Cognitive and Behavioral Psychotherapies*, 6 (2), 173-181.
- Welburn K., Coristine, M., Dagg, P., Pontefract, A., & Jordan, S. (2002). The Schema Questionnaire-Short Form: Factor Analysis and Relationship Between Schemas and Symptoms. *Cognitive Therapy and Research*, 26 (4). 519–530
- Young, J. E. (1999). *Cognitive therapy for personality disorders: a schema focused approach*. (3rd ed.). Florida: Professional Resource Press.
- Young, J.E, Klosko, J.S, & Weishaar, M.E. (2003). *Schema Therapy: A Practitioner's Guide*. New York: The Guildford Press.

10. Appendices

Appendix I: Letter to South African Anxiety and Depression Group

Appendix II: Informed Consent Form

Appendix III: Young's Schema Questionnaire (YSQ-S)

Appendix IV: Anxiety Scale

Appendix V: Egna Minnen Beträffande Uppfostran (EMBU-S)

Appendix VI: Abbreviations for the 16 schemas

Appendix VII: SPSS Statistical Output

Appendix VIII: Ethical Clearance

Appendix I: Letter to South African Anxiety and Depression Group

December 15, 2010

Ms Zane Wilson

SADAG

Dear Zane

My name is Darryn Costello; I am enrolled at the University of KwaZulu-Natal (UKZN) (Pietermaritzburg Campus) to do a Masters in Social Science (Clinical Psychology) this year. Part of the programme is to complete a research project, and my study will be on cognitive schemas and anxiety. I have already completed a preliminary project in this area for my Honours research project. As you probably know, there is considerable research showing the importance of cognitive schemas in both depression and anxiety. My research shall be supervised by Professor Graham Lindegger (lindegger@ukzn.ac.za).

In my study I will be examining the relationship between types of anxiety, early maladaptive schemas, and parenting styles. I will be using a questionnaire to measure each of these variables. Ideally I would like the sample of this study to be a clinical sample of people with anxiety and/or depression. The findings of the study could make some contribution to both the prevention and treatment of anxiety disorders.

Prof Lindegger suggested that I contact SADAG, and you in particular, to find out whether it would be possible to contact your members to invite them to participate in this study. If this is possible, I could email you a letter of invitation which could then be forwarded to your members. Those interested in participating would then be able to contact me. I in turn would direct interested potential participants to an electronic version of the questionnaires. There will be four parts to this website, a consent form and explanation of the study, and then

the three questionnaires. Confidentiality and anonymity rules shall be strictly adhered to as this is academic psychological research. There will be no need for anyone to disclose their identity, except for the consent form.

I would be very happy to provide SADAG with user friendly feedback to assist you and your members on completion of the study.

I would be very grateful if you would be prepared to email members of SADAG on your database to invite them to participate in this study.

Please do not hesitate to contact me if you have further questions (079 886 8094 or 206508405@ukzn.ac.za). Professor Lindegger is also very happy to discuss the study with you (033-260-5335 or Lindegger@ukzn.ac.za).

Regards,
Darryn Costello

Appendix II: Informed Consent Form

Sample Consent form

Hello, I am Darryn Costello I am from the University of Kwa-Zulu Natal. I am conducting research to explore a link between parental rearing behaviours, ways of thinking, and patterns of anxiety. The study aims to explore whether particular styles of child rearing and particular styles of thinking put people more at risk for anxiety and its disorders. The results of this study shall be written up as a Master's thesis, and hopefully published in scientific journals. No personally identifiable details will be used and your data will be completely confidential. The sample of my research consists of 1. Psychology undergraduate students over the age of 18. and 2. South African Depression and Anxiety Group members over the age of 18.

Please understand that your participation is voluntary and you should only take part if you want to. However, I would really appreciate it if you do participate. If you choose not to take part in this study, you will not be affected in any way whatsoever. If you agree to participate, you may withdraw at any time and discontinue your participation. If you no longer want to participate or wish to withdraw at any stage, there will be no penalties and you will not be prejudiced in any way.

I will not be recording your name anywhere on the questionnaires, and no one will be able to link you to the answers you give. Only the researcher and his supervisor will have access to the unlinked information. All individual information will remain confidential.

If you feel at any point that the items of the questionnaire are upsetting you, we can stop and you may decide to withdraw or talk about it then continue. There are professionals at the Student Counselling Centre (on campus) and professionals at SADAG who are willing and available to talk with you/assist you with those feelings that upset you, if you need assistance later.

Should you wish to contact me with any questions about this study, you may contact me (Darryn Costello) by email: 206508405@ukzn.ac.za or should you wish to contact my supervisor Professor Graham Lindegger with any problems or questions, you may on lindegger@ukzn.ac.za.

Consent

I hereby agree to participate in research regarding early maladaptive schemas, patterns of anxiety and perceived parental rearing behaviours. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that decision will not in any way affect me negatively.

The purpose of the study has been explained to me, and I understand what is expected of my participation. I understand that this is a research project whose purpose is not necessarily to benefit me personally.

I have received contact information should I have any questions about the study.

I understand that this consent form will not be linked to the questionnaire, and that my answers will remain confidential.

Full Name: _____

Email: _____

Date: _____

Appendix III: Young's Schema Questionnaire (YSQ-S)

Instructions:

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally **feel**, not on what you **think** to be true. Choose the **highest rating from 1 to 6** that describes you and write the number in the space next to the statement.

Rating Scale:

1 = Completely untrue of me

2 = Mostly untrue of me

3 = Slightly more true than untrue

4 = Moderately true of me

5 = Mostly true of me

6 = Describes me perfectly

1. ____ Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.

2. ____ In general, people have not been there to give me warmth, holding, and affection.

3. ____ For much of my life, I haven't felt that I am special to someone.

4. ____ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. ____ I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.

*ed

6. _____ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.

7. _____ I need other people so much that I worry about losing them.

8. _____ I worry that people I feel close to will leave me or abandon me.

9. _____ When I feel someone I care for pulling away from me, I get desperate.

10. _____ Sometimes I am so worried about people leaving me that I drive them away.

*ab

11. _____ I feel that people will take advantage of me.

12. _____ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13. _____ It is only a matter of time before someone betrays me.

14. _____ I am quite suspicious of other people's motives.

15. _____ I'm usually on the lookout for people's ulterior motives.

*ma

16. _____ I don't fit in.

17. _____ I'm fundamentally different from other people.

18. _____ I don't belong; I'm a loner.

19. _____ I feel alienated from other people.

20. _____ I always feel on the outside of groups.

*si

21. _____ No man/woman I desire could love me once he/she saw my defects.

22. _____ No one I desire would want to stay close to me if he/she knew the real me.

23. _____ I'm unworthy of the love, attention, and respect of others.

24. _____ I feel that I'm not lovable.

25. _____ I am too unacceptable in very basic ways to reveal myself to other people.

*ds

26. _____ Almost nothing I do at work (or school) is as good as other people can do.

27. _____ I'm incompetent when it comes to achievement.

28. _____ Most other people are more capable than I am in areas of work and achievement.

29. _____ I'm not as talented as most people are at their work.

30. _____ I'm not as intelligent as most people when it comes to work (or school).

*fa

31. _____ I do not feel capable of getting by on my own in everyday life.

32. _____ I think of myself as a dependent person, when it comes to everyday functioning.

33. _____ I lack common sense.

34. _____ My judgment cannot be relied upon in everyday situations.

35. _____ I don't feel confident about my ability to solve everyday problems that come up.

*di

36. _____ I can't seem to escape the feeling that something bad is about to happen.

37. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.

38. _____ I worry about being attacked.

39. _____ I worry that I'll lose all my money and become destitute.

40. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.

*vh

41. _____ I have not been able to separate myself from my parent(s), the way other people my age seem to.

42. _____ My parent(s) and I tend to be over-involved in each other's lives and problems.

43. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.

44. _____ I often feel as if my parent(s) are living through me--I don't have a life of my own.

45. _____ I often feel that I do not have a separate identity from my parent(s) or partner.

*em

46. _____ I think that if I do what I want, I'm only asking for trouble.

47. _____ I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.

48. _____ In relationships, I let the other person have the upper hand.

49. _____ I've always let others make choices for me, so I really don't know what I want for myself.

50. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.

*sb

51. _____ I'm the one who usually ends up taking care of the people I'm close to.

52. _____ I am a good person because I think of others more than of myself.

53. _____ I'm so busy doing for the people that I care about, that I have little time for myself.

54. _____ I've always been the one who listens to everyone else's problems.

55. _____ Other people see me as doing too much for others and not enough for myself.

*ss

56. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

57. _____ I find it embarrassing to express my feelings to others.

58. _____ I find it hard to be warm and spontaneous.

59. _____ I control myself so much that people think I am unemotional.

60. _____ People see me as uptight emotionally.

*ei

61. _____ I must be the best at most of what I do; I can't accept second best.

62. _____ I try to do my best; I can't settle for "good enough."

63. _____ I must meet all my responsibilities.

64. _____ I feel there is constant pressure for me to achieve and get things done.

65. _____ I can't let myself off the hook easily or make excuses for my mistakes.

*us

66. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.

67. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

68. _____ I hate to be constrained or kept from doing what I want.

69. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

70. _____ I feel that what I have to offer is of greater value than the contributions of others.

*et

71. _____ I can't seem to discipline myself to complete routine or boring tasks.

72. _____ If I can't reach a goal, I become easily frustrated and give up.

73. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

74. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.

75. _____ I have rarely been able to stick to my resolutions.

*is

76. _____ I can't carry on a decent conversation.

77. _____ I'm dull and boring in social situations.

78. _____ People I value wouldn't associate with me because of my social status.

79. _____ I never know what to say socially.

80. _____ I am very self-conscious around other people.

*su

Appendix IV: Anxiety Scale

Demographic Information

Age:

Sex:

Race:

Questionnaire 1: Anxiety Scale

Instructions: Listed below are statements that a person might use to describe herself/himself.

Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally **feel**, **not** on what you **think** to be true. There are no right or wrong answers. Choose the **highest rating from 1 to 4** that describes you and write the number in the space next to the statement.

Rating Scale:

1= Almost never

2= Sometimes

3= Often

4= Almost always

1. ____ I get nervous/worried before tests and exams.
2. ____ I am very relaxed in the presence of people I don't know.
3. ____ I easily worry about different things.
4. ____ I wish that I would be as happy as others seem to be.
5. ____ I am losing out on things because I can't make up my mind soon enough.
6. ____ I feel tense when I go into a test or exam.
7. ____ I worry what other people will think about me.
8. ____ I fear that things will go wrong in my life.
9. ____ I am "calm, cool, and collected".
10. ____ I feel that difficulties are piling up so that I cannot overcome them.
11. ____ Just before an exam I feel sweaty and shaky.
12. ____ I don't like situations where I am the focus of other people's attention e.g.: speaking in public.
13. ____ I find it difficult to get worries out of my mind.
14. ____ I worry too much over something that really doesn't matter.
15. ____ I am a happy person.

16. ____	Before tests or exams I worry that I will fail or do badly.
17. ____	I fear that I will make a fool of myself in front of other people.
18. ____	I am an easy going person who worries about few things.
19. ____	I try avoid facing crisis or difficulty.
20. ____	Some unimportant thought runs through my mind and bothers me.
21. ____	Around exam time I find it very difficult to relax.
22. ____	Fear of embarrassment causes me to avoid doing things or speaking to people.
23. ____	I have an inability to control the worry in my life.
24. ____	I take disappointments so keenly that I can't put them out of my mind.
25. ____	I am a steady person.

Appendix V: Egna Minnen Beträffande Uppfostran (EMBU-S)

(“My Memories of My Upbringing”)

Instructions

Below are a number of questions concerning your childhood. Please read through the following instructions carefully before filling out the questionnaire. Even if it is difficult to recall exactly how our parents behaved towards us when we were very young, each of us does have certain memories of what principles they used in our upbringing.

When filling out this questionnaire it is essential that you try to remember your parents’ behavior towards you as you yourself experienced it. For each question you must rate the alternative applicable to your own mother’s and father’s behavior towards you. Be careful not to leave any questions unanswered. We are aware that certain questions are impossible to answer if you do not have any sister(s) or brother(s) or if you have been raised by one parent only. In this case leave these questions unanswered.

For each question please circle (if printed) or **enlarge font/bold** (if electronic copy) the responses (number) applicable to your mother’ and father’s behavior towards you. Read through each question carefully and consider which one of the possible answers applies to you. Answer separately for your father (F) and your mother (M).

		No, never	Yes, but seldom	Yes, often	Yes, most of the time
1. It happened that my parents were sour or angry with me without letting me know the cause.	F	1	2	3	4
	M	1	2	3	4
2. My parents praised me.	F	1	2	3	4
	M	1	2	3	4
3. It happened that I wished my parents would worry less about what I was doing	F	1	2	3	4

	M	1	2	3	4
4. It happened that my parents gave me more corporal punishment than I deserved.	F	1	2	3	4
	M	1	2	3	4
5. When I came home, I then had to account for what I had been doing\ to my parents.	F	1	2	3	4
	M	1	2	3	4
6. I think that my parents tried to make my adolescence stimulating\ interesting and instructive (For instance by giving me good books, arranging for me to go on camps, taking me to clubs).	F	1	2	3	4
	M	1	2	3	4
7. My parents criticized me and told me how lazy and useless I was in front of others.	F	1	2	3	4
	M	1	2	3	4
8. It happened that my parents forbade me to do things other children were allowed to do because they were afraid that something might happen to me.	F	1	2	3	4
	M	1	2	3	4
9. My parents tried to spur me to become the best.	F	1	2	3	4
	M	1	2	3	4
10. My parents would look sad or in some other way show that I had behaved badly so that I got real feelings of guilt.	F	1	2	3	4
	M	1	2	3	4

11. I think that my parents' anxiety that something might happen to me was exaggerated.	F	1	2	3	4
	M	1	2	3	4
12. If things went badly for me, I then felt that my parents tried to comfort and encourage me.	F	1	2	3	4
	M	1	2	3	4
13. I was treated as the "black sheep" or 'scapegoat' of the family.	F	1	2	3	4
	M	1	2	3	4
14. My parents showed with words and gestures that they liked me.	F	1	2	3	4
	M	1	2	3	4
15. I felt that my parents liked my brother(s) and/or sister(s) more than they liked me.	F	1	2	3	4
	M	1	2	3	4
16. My parents treated me in such a way that I felt ashamed.	F	1	2	3	4
	M	1	2	3	4
17. I was allowed to go where I liked without my parents caring too much.	F	1	2	3	4
	M	1	2	3	4
18. I felt that my parents interfered with everything I did.	F	1	2	3	4
	M	1	2	3	4
19. I felt that warmth and tenderness existed between me and my parents.	F	1	2	3	4
	M	1	2	3	4

20. My parents put decisive limits for what I was and was not allowed to do, to which they then adhered rigorously.	F	1	2	3	4
	M	1	2	3	4
21. My parents would punish me hard, even for trifles (small offenses).	F	1	2	3	4
	M	1	2	3	4
22. My parents wanted to decide how I should be dressed or how I should look.	F	1	2	3	4
	M	1	2	3	4
23. I felt that my parents were proud when I succeeded in something I had undertaken.	F	1	2	3	4
	M	1	2	3	4

Appendix VI: Abbreviations for the 16 schemas

ED- Emotional Deprivation

AB- Abandonment

MA- Mistrust/Abuse

SI- Social Isolation

DS- Defectiveness/Shame

FA- Failure to achieve

DI- Dependence/Incompetence

VH- Vulnerability to Harm and Illness

EM- Enmeshment

SB- Subjugation

SS- Self-Sacrifice

EI- Emotional Inhibition

US- Unrelenting Standards

ET- Entitlement

IS- Insufficient Self-Control/Self-Discipline

SU- Social Undesirability

Appendix VII: SPSS Statistical Output

Correlations between Dimensions of Anxiety and Early Maladaptive Schemas (pg.92- 93)

		Age	Sex	TA	SA	GA	Trait	ed	
Age	Pearson Correlation	1	-.056	-.013	-.039	.019	-.103	.098	
	Sig. (2-tailed)		.597	.905	.712	.862	.333	.357	
	N	91	91	91	91	91	91	91	
Sex	Pearson Correlation	-.056	1	.172	.077	.129	.185	.096	
	Sig. (2-tailed)	.597		.103	.467	.222	.079	.368	
	N	91	91	91	91	91	91	91	
TA	Pearson Correlation	-.013	.172	1	.352(**)	.511(**)	.415(**)	.086	
	Sig. (2-tailed)	.905	.103		.001	.000	.000	.418	
	N	91	91	91	91	91	91	91	
SA	Pearson Correlation	-.039	.077	.352(**)	1	.525(**)	.464(**)	.158	
	Sig. (2-tailed)	.712	.467	.001		.000	.000	.135	
	N	91	91	91	91	91	91	91	
GA	Pearson Correlation	.019	.129	.511(**)	.525(**)	1	.545(**)	.206	
	Sig. (2-tailed)	.862	.222	.000	.000		.000	.050	
	N	91	91	91	91	91	91	91	
Trait	Pearson Correlation	-.103	.185	.415(**)	.464(**)	.545(**)	1	.278(**)	
	Sig. (2-tailed)	.333	.079	.000	.000	.000		.008	
	N	91	91	91	91	91	91	91	
ed	Pearson Correlation	.098	.096	.086	.158	.206	.278(**)	1	
	Sig. (2-tailed)	.357	.368	.418	.135	.050	.008		
	N	91	91	91	91	91	91	91	
ab	Pearson Correlation	-.018	.087	.313(**)	.288(**)	.421(**)	.453(**)	.396(**)	
	Sig. (2-tailed)	.863	.410	.002	.006	.000	.000	.000	
	N	91	91	91	91	91	91	91	
ma	Pearson Correlation	-.042	.069	.423(**)	.376(**)	.283(**)	.330(**)	.390(**)	
	Sig. (2-tailed)	.692	.517	.000	.000	.007	.001	.000	
	N	90	90	90	90	90	90	90	
si	Pearson Correlation	.087	.016	.196	.373(**)	.202	.296(**)	.369(**)	
	Sig. (2-tailed)	.413	.877	.062	.000	.054	.004	.000	
	N	91	91	91	91	91	91	91	
ds	Pearson Correlation	.119	.086	.161	.387(**)	.315(**)	.389(**)	.615(**)	
	Sig. (2-tailed)	.261	.418	.128	.000	.002	.000	.000	
	N	91	91	91	91	91	91	91	
fa	Pearson Correlation	.032	.271(**)	.408(**)	.361(**)	.532(**)	.423(**)	.199	
	Sig. (2-tailed)	.766	.009	.000	.000	.000	.000	.058	
	N	91	91	91	91	91	91	91	
di	Pearson Correlation	.036	.134	.201	.278(**)	.240(*)	.385(**)	.364(**)	
	Sig. (2-tailed)	.733	.204	.057	.008	.022	.000	.000	
	N	91	91	91	91	91	91	91	

vh	Pearson Correlation	-.143	.194	.365(**)	.328(**)	.444(**)	.382(**)	.380(**)
	Sig. (2-tailed)	.176	.065	.000	.002	.000	.000	.000
	N	91	91	91	91	91	91	91
em	Pearson Correlation	.059	-.024	.069	.153	.100	.038	-.015
	Sig. (2-tailed)	.576	.819	.517	.148	.344	.722	.887
	N	91	91	91	91	91	91	91
sb	Pearson Correlation	.001	.056	.312(**)	.447(**)	.449(**)	.485(**)	.409(**)
	Sig. (2-tailed)	.994	.601	.003	.000	.000	.000	.000
	N	91	91	91	91	91	91	91
ss	Pearson Correlation	.106	.121	.220(*)	.172	.230(*)	.277(**)	.256(*)
	Sig. (2-tailed)	.319	.253	.036	.102	.028	.008	.014
	N	91	91	91	91	91	91	91
ei	Pearson Correlation	-.014	.048	.216(*)	.328(**)	.225(*)	.245(*)	.372(**)
	Sig. (2-tailed)	.897	.652	.040	.002	.032	.019	.000
	N	91	91	91	91	91	91	91
us	Pearson Correlation	.104	-.154	.120	.186	.129	.127	.206
	Sig. (2-tailed)	.327	.145	.257	.078	.224	.231	.051
	N	91	91	91	91	91	91	91
et	Pearson Correlation	.024	-.169	.208(*)	.234(*)	.232(*)	.195	.217(*)
	Sig. (2-tailed)	.825	.109	.048	.025	.027	.064	.039
	N	91	91	91	91	91	91	91
is	Pearson Correlation	.016	-.186	.236(*)	.279(**)	.232(*)	.284(**)	.169
	Sig. (2-tailed)	.881	.077	.024	.007	.027	.006	.109
	N	91	91	91	91	91	91	91
su	Pearson Correlation	-.030	.104	.138	.402(**)	.228(*)	.246(*)	.226(*)
	Sig. (2-tailed)	.779	.325	.191	.000	.030	.019	.032
	N	91	91	91	91	91	91	91

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

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

Correlations between Early Maladaptive Schemas and Perceived Parental Rearing Behaviours (pg.95-97)

		Age	Sex	TA	SA	GA	Trait	ed
Age	Pearson Correlation	1	-.056	-.013	-.039	.019	-.103	.098
	Sig. (2-tailed)		.597	.905	.712	.862	.333	.357
	N	91	91	91	91	91	91	91
Sex	Pearson Correlation	-.056	1	.172	.077	.129	.185	.096
	Sig. (2-tailed)	.597		.103	.467	.222	.079	.368
	N	91	91	91	91	91	91	91
TA	Pearson Correlation	-.013	.172	1	.352(**)	.511(**)	.415(**)	.086
	Sig. (2-tailed)	.905	.103		.001	.000	.000	.418
	N	91	91	91	91	91	91	91
SA	Pearson Correlation	-.039	.077	.352(**)	1	.525(**)	.464(**)	.158
	Sig. (2-tailed)	.712	.467	.001		.000	.000	.135
	N	91	91	91	91	91	91	91
GA	Pearson Correlation	.019	.129	.511(**)	.525(**)	1	.545(**)	.206
	Sig. (2-tailed)	.862	.222	.000	.000		.000	.050
	N	91	91	91	91	91	91	91
Trait	Pearson Correlation	-.103	.185	.415(**)	.464(**)	.545(**)	1	.278(**)
	Sig. (2-tailed)	.333	.079	.000	.000	.000		.008
	N	91	91	91	91	91	91	91
ed	Pearson Correlation	.098	.096	.086	.158	.206	.278(**)	1
	Sig. (2-tailed)	.357	.368	.418	.135	.050	.008	
	N	91	91	91	91	91	91	91
ab	Pearson Correlation	-.018	.087	.313(**)	.288(**)	.421(**)	.453(**)	.396(**)
	Sig. (2-tailed)	.863	.410	.002	.006	.000	.000	.000
	N	91	91	91	91	91	91	91
ma	Pearson Correlation	-.042	.069	.423(**)	.376(**)	.283(**)	.330(**)	.390(**)
	Sig. (2-tailed)	.692	.517	.000	.000	.007	.001	.000
	N	90	90	90	90	90	90	90
si	Pearson Correlation	.087	.016	.196	.373(**)	.202	.296(**)	.369(**)
	Sig. (2-tailed)	.413	.877	.062	.000	.054	.004	.000
	N	91	91	91	91	91	91	91
ds	Pearson Correlation	.119	.086	.161	.387(**)	.315(**)	.389(**)	.615(**)
	Sig. (2-tailed)	.261	.418	.128	.000	.002	.000	.000
	N	91	91	91	91	91	91	91
fa	Pearson Correlation	.032	.271(**)	.408(**)	.361(**)	.532(**)	.423(**)	.199
	Sig. (2-tailed)	.766	.009	.000	.000	.000	.000	.058
	N	91	91	91	91	91	91	91
di	Pearson Correlation	.036	.134	.201	.278(**)	.240(*)	.385(**)	.364(**)
	Sig. (2-tailed)	.733	.204	.057	.008	.022	.000	.000
	N	91	91	91	91	91	91	91
vh	Pearson Correlation	-.143	.194	.365(**)	.328(**)	.444(**)	.382(**)	.380(**)
	Sig. (2-tailed)	.176	.065	.000	.002	.000	.000	.000
	N	91	91	91	91	91	91	91
em	Pearson Correlation	.059	-.024	.069	.153	.100	.038	-.015
	Sig. (2-tailed)	.576	.819	.517	.148	.344	.722	.887
	N	91	91	91	91	91	91	91
sb	Pearson Correlation	.001	.056	.312(**)	.447(**)	.449(**)	.485(**)	.409(**)
	Sig. (2-tailed)	.994	.601	.003	.000	.000	.000	.000
	N	91	91	91	91	91	91	91
ss	Pearson Correlation	.106	.121	.220(*)	.172	.230(*)	.277(**)	.256(*)
	Sig. (2-tailed)	.319	.253	.036	.102	.028	.008	.014
	N	319	253	102	102	102	102	102

		Age	Sex	TA	SA	GA	Trait	ed	
Age	Pearson Correlation	1	-.056	-.013	-.039	.019	-.103	.098	
	Sig. (2-tailed)		.597	.905	.712	.862	.333	.357	
	N	91	91	91	91	91	91	91	
Sex	Pearson Correlation	-.056	1	.172	.077	.129	.185	.096	
	Sig. (2-tailed)	.597		.103	.467	.222	.079	.368	
	N	91	91	91	91	91	91	91	
TA	Pearson Correlation	-.013	.172	1	.352(**)	.511(**)	.415(**)	.086	
	Sig. (2-tailed)	.905	.103		.001	.000	.000	.418	
	N	91	91	91	91	91	91	91	
SA	Pearson Correlation	-.039	.077	.352(**)	1	.525(**)	.464(**)	.158	
	Sig. (2-tailed)	.712	.467	.001		.000	.000	.135	
	N	91	91	91	91	91	91	91	
GA	Pearson Correlation	.019	.129	.511(**)	.525(**)	1	.545(**)	.206	
	Sig. (2-tailed)	.862	.222	.000	.000		.000	.050	
	N	91	91	91	91	91	91	91	
Trait	Pearson Correlation	-.103	.185	.415(**)	.464(**)	.545(**)	1	.278(**)	
	Sig. (2-tailed)	.333	.079	.000	.000	.000		.008	
	N	91	91	91	91	91	91	91	
ed	Pearson Correlation	.098	.096	.086	.158	.206	.278(**)	1	
	Sig. (2-tailed)	.357	.368	.418	.135	.050	.008		
	N	91	91	91	91	91	91	91	
ab	Pearson Correlation	-.018	.087	.313(**)	.288(**)	.421(**)	.453(**)	.396(**)	
	Sig. (2-tailed)	.863	.410	.002	.006	.000	.000	.000	
	N	91	91	91	91	91	91	91	
ma	Pearson Correlation	-.042	.069	.423(**)	.376(**)	.283(**)	.330(**)	.390(**)	
	Sig. (2-tailed)	.692	.517	.000	.000	.007	.001	.000	
	N	90	90	90	90	90	90	90	
si	Pearson Correlation	.087	.016	.196	.373(**)	.202	.296(**)	.369(**)	
	Sig. (2-tailed)	.413	.877	.062	.000	.054	.004	.000	
	N	91	91	91	91	91	91	91	
ds	Pearson Correlation	.119	.086	.161	.387(**)	.315(**)	.389(**)	.615(**)	
	Sig. (2-tailed)	.261	.418	.128	.000	.002	.000	.000	
	N	91	91	91	91	91	91	91	
fa	Pearson Correlation	.032	.271(**)	.408(**)	.361(**)	.532(**)	.423(**)	.199	
	Sig. (2-tailed)	.766	.009	.000	.000	.000	.000	.058	
	N	91	91	91	91	91	91	91	
di	Pearson Correlation	.036	.134	.201	.278(**)	.240(*)	.385(**)	.364(**)	
	Sig. (2-tailed)	.733	.204	.057	.008	.022	.000	.000	
	N	91	91	91	91	91	91	91	
vh	Pearson Correlation	-.143	.194	.365(**)	.328(**)	.444(**)	.382(**)	.380(**)	
	Sig. (2-tailed)	.176	.065	.000	.002	.000	.000	.000	
	N	91	91	91	91	91	91	91	
em	Pearson Correlation	.059	-.024	.069	.153	.100	.038	-.015	
	Sig. (2-tailed)	.576	.819	.517	.148	.344	.722	.887	

	N	91	91	91	91	91	91	91
sb	Pearson Correlation	.001	.056	.312(**)	.447(**)	.449(**)	.485(**)	.409(**)
	Sig. (2-tailed)	.994	.601	.003	.000	.000	.000	.000
	N	91	91	91	91	91	91	91
ss	Pearson Correlation	.106	.121	.220(*)	.172	.230(*)	.277(**)	.256(*)
	Sig. (2-tailed)	.319	.253	.036	.102	.028	.008	.014
	N	91	91	91	91	91	91	91
ei	Pearson Correlation	-.014	.048	.216(*)	.328(**)	.225(*)	.245(*)	.372(**)
	Sig. (2-tailed)	.897	.652	.040	.002	.032	.019	.000
	N	91	91	91	91	91	91	91
us	Pearson Correlation	.104	-.154	.120	.186	.129	.127	.206
	Sig. (2-tailed)	.327	.145	.257	.078	.224	.231	.051
	N	91	91	91	91	91	91	91
et	Pearson Correlation	.024	-.169	.208(*)	.234(*)	.232(*)	.195	.217(*)
	Sig. (2-tailed)	.825	.109	.048	.025	.027	.064	.039
	N	91	91	91	91	91	91	91
is	Pearson Correlation	.016	-.186	.236(*)	.279(**)	.232(*)	.284(**)	.169
	Sig. (2-tailed)	.881	.077	.024	.007	.027	.006	.109
	N	91	91	91	91	91	91	91
su	Pearson Correlation	-.030	.104	.138	.402(**)	.228(*)	.246(*)	.226(*)
	Sig. (2-tailed)	.779	.325	.191	.000	.030	.019	.032
	N	91	91	91	91	91	91	91

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

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

Appendix VIII: Ethical Clearance



Research Office, Govan Mbeki Centre
Westville Campus
Private Bag x54001
DURBAN, 4000
Tel No: +27 31 260 3587
Fax No: +27 31 260 4609
mohunp@ukzn.ac.za

8 April 2011

Mr DJ Costello (206508405)
School of Psychology
Faculty of Humanities, Development and
Social Sciences
Pietermaritzburg Campus

Dear Mr Costello

PROTOCOL REFERENCE NUMBER: HSS/0159/011M

PROJECT TITLE: Early Maladaptive Schemas: The relationship with anxiety patterns, and perceived parental rearing behaviours

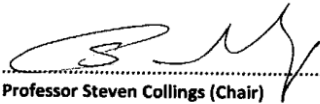
In response to your application dated 6 April 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully


.....
Professor Steven Collings (Chair)
HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

cc. Supervisor: Prof G Lindegger
cc. Mrs B Jacobsen