The efficacy of Early Childhood Memories as indicators of current maladaptive schemas and psychological health.

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Declaration

I declare that this dissertation is my own account of my research and does not contain work that has previously been submitted for a degree at any tertiary institution or for publication, without due acknowledgment.

I further declare that the ethical principles and procedures specified by the Swinburne University Psychology Discipline's document on human research and experimentation have been adhered to in the preparation of this report.

Steve Theiler

Abstract

This thesis investigates theoretical propositions of Beck (1996), Epstein (1987), and Young (1999) that suggest maladaptive schemas operating as deep unconscious cognitions are intrinsically linked to the psychological health and wellbeing of the individual. To date, research on psychological health has mainly used self-report measures that focus on conscious processes. The primary aim of this thesis was to explore particular maladaptive schemas that purportedly operate unconsciously and to examine their relationship with self-reported psychological dysfunction. Bruhn's (1990a) Cognitive Perceptual Theory of early childhood memories was employed as a vehicle to access schemas deemed outside of conscious awareness. These unconscious schemas were investigated in conjunction with current self-reported maladaptive schemas in Study 1 and psychological symptoms in Study 2.

The participants in Study 1 comprised 249 undergraduate first year psychology students. There were 198 women and 50 men with a mean age of 22 years who were asked to write down four early childhood memories. The first two memories were spontaneous in order to reveal the most pressing underlying schemas. The next two early memories requested were relating to mother and to father, to gain schema information about relationship dynamics. The participants then filled out the short-form of Young's (1998) Schema Questionnaire (YSQ-S). Independent raters coded the memories for Young's (1994) Early Maladaptive Schemas, and Last and Bruhn's (1992) Object Relations categories of 'Perceptions of Others', 'Perceptions of the Self', 'Perception of Environment', and 'Degree of Interpersonal Contact', and 'Individual Distinctiveness'. Polyserial

correlations indicated that there were significant relationships between maladaptive schemas represented in early memories and self-reported maladaptive schemas. However, the lack of maladaptive schemas in memories being linked to the same maladaptive schemas that were being self-reported, suggested that the schemas represented in memories were tapping into a different source of information than conscious self-reports. A Discriminant Function Analysis (DFA) was performed with the sample divided into three groups (low, medium and high YSQ-S scorers). The results showed that maladaptive schemas identified in early memories that corresponded to Young's (1990) 'Disconnection and Rejection' domain and, Last and Bruhn's (1992) Object Relations theme of 'Perceiving the Environment as Unsafe', were significant predictors of people in the group with high levels of self-reported maladaptive schemas. These variables also differentiated people in the high group from those in the low group at a greater rate than chance (33 percent). Fifty–six percent of people were correctly allocated to the high group on the basis of representations of these particular schemas in their memories. When only the low and high groups were analysed, using individual schemas rather than domains, 'Mistrust/Abuse', 'Social Isolation', 'Emotional Deprivation' and 'Subjugation' schemas in the first analysis and 'Perceptions of the Environment as Unsafe' in the second analysis were found to be significant predictors. These predictors correctly classified 70 percent of cross-validated cases in the high groups in both analyses.

For Study 2, the participants comprised 278 undergraduate first year psychology students. There were 65 men and 206 women with a mean age of 22 years who provided accounts of four early childhood memories as in Study 1.

They also completed the Brief Symptom Inventory (BSI; Derogatis, 1993). As with Study 1, the accounts of the completed early childhood memories were coded by independent raters who examined the memories for Young's (1994) Maladaptive Schemas and Last and Bruhn's (1992) Object Relations categories. Additionally, following each memory, the participants rated their memories using Hermans and Hermans-Jansen's (1995) list of Affect Terms.

The sample was divided into three groups on the basis of the General Severity Index [GSI] scores (low, medium and high scorers) that were derived from the BSI (Derogatis, 1993). A Discriminant Function Analysis showed that maladaptive schemas identified in the memories that corresponded to Young's (1990) 'Disconnection and Rejection' domain were significant predictors of people in the group with high levels of self-reported psychological symptoms (Derogatis, 1993). Fifty percent of people (which is greater than the chance rate of 33 percent) were correctly predicted as belonging to the high group on the basis of representations of schemas from this domain.

In another DFA analysis that used individual schemas instead of domains, 'Abandonment' and 'Insufficient Self-Control', together with 'Perceiving the Environment to be safe' and 'Negative Affect', were found to be significant predictors that correctly allocated 58 percent of people into the high GSI group. Further analysis using only the low and high groups resulted in 83 percent of people in the high group being correctly identified on the basis of representations of 'Abandonment', 'Insufficient Self-Control' and 'Perceiving the Environment to be safe'. These results endorse the relevance of the relationships among an

underlying sense of abandonment and insufficient self-control with high levels of psychological symptoms of distress.

Taken together, the findings from both studies support the theoretical proposition that schemas residing outside of conscious awareness can have a pervasive link with psychological health and wellbeing. A particularly important discovery was that a relatively small number of schemas centered around perceptions of 'Disconnection and Rejection' from others, that were operating unconsciously, were significantly linked to people in both studies who reported a wide range of psychological difficulties. It was concluded that investigating object relations, affect, and Young's (1990) maladaptive schemas in early memories, is an efficient and possibly essential method of gaining information that may otherwise not be obtained from self-report measures exclusively. Consequently, in therapy, maladaptive schemas associated with disconnection and rejection represented in clients' early childhood memories can be viewed as very important unconscious schemas to examine. This is especially necessary given that these schemas may not be consciously accessed or easily articulated by clients, and yet seem to be intrinsically linked to a range of conscious psychological difficulties.

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CHAPTER 1

THE INFLUENCE OF SCHEMAS ON PSYCHOLOGICAL HEALTH

1.1   Introduction and Overview

This thesis involved an investigation into maladaptive schemas that many theorists contend operate outside of conscious awareness and have a pervasive effect on a person's psychological health (e.g., Beck, 1996; Pacini & Epstein, 1999; Young, Klosko & Weishaar, 2003). Schemas are important to evaluate as they have been conceptualised as templates for the processing of experiences and new information that form the building blocks of personality (e.g., Beck & Freeman, 1990; Epstein, 1994). They comprise stable and lasting themes that develop in childhood from relations with others, significant affective experiences, and the child's environment. They become clusters of past experiences that are formed into implicit beliefs and values through which people view themselves, their environment and others (Young, 1999). It is postulated that understanding the content of people's schemas enables an understanding of their psychological health and behaviour.

To date, research on maladaptive schemas has relied predominantly on self-report questionnaires methodology (e.g., Beck, 1976; Epstein, Pacini, Denes-Raj, & Heier, 1996; Young, 1998). In this thesis it is argued that self-report questionnaires are restricted to conscious cognitive processes and therefore may not reflect the unconscious influences on behaviour of maladaptive schemas.

Young, Beck, and Epstein and colleagues have proposed ways (other than self-reports) in which maladaptive schemas that operate outside of conscious awareness can be accessed, such as through early childhood memories (McGinn & Young, 1997), history taking (Beck & Freeman, 1990), or images and narratives (Epstein & Pacini, 1999). However, little research has investigated the impact of the unconscious aspects of maladaptive schemas on self-reported psychological symptoms.

Bruhn (e.g., 1981; 1985; 1990) and others (e.g., Fowler, Hilsenroth, & Handler, 1995; Mayman, 1968) have found that early childhood memories reveal indications of a person's current psychological health and important unresolved issues in his or her life. Therefore, Bruhn's (1995) methodology for analysing the content of early childhood memories was adopted in this thesis, as it provides a tested framework to access information that is outside of conscious awareness.

This thesis involved two independent but related studies that investigated unconscious maladaptive schemas represented in early memories and their relationship to self-reported psychological health. The overall aim of the empirical work was to investigate whether there is support for the theoretical notions of Beck, Young, and Epstein that unconscious maladaptive schemas and associated representations of self, others, the environment, and negative and positive affect, are intrinsically related to (a) current self-reports of maladaptive schemas (Study 1) and (b) psychological symptoms (Study 2). A related aim for Study 1 was to identify the specific schemas and representations of self, others, and the environment that best distinguish individuals who report high levels of maladaptive schemas. The aim of Study 2 was to identify the specific schemas

and their associated affect, representations of self, others and the environment that best identify individuals who self-report high levels of particular psychological symptoms.

In brief, Chapter 1 examines theories that suggest that schemas are the building blocks of personality (e.g., Beck & Freeman, 1990). Schemas are considered important as they represent the self's 'lenses' through which people view themselves, their environment and others. Beck's (1996) later writings also suggest that schemas are connected networks that include cognitive, affective and unconscious components that influence psychological health and behaviour. Young's (1999) extension of Beck and colleagues (e.g., Beck, 1967; 1976; Freeman & Beck, 1990) conception of maladaptive schemas is then discussed. Young has identified a number of specific maladaptive schemas and developed a measure to investigate their influence. Empirical evidence that supports the utility of Young's maladaptive schemas and their relationship with psychological ill-health is also examined.

Other theories (e.g., Graf & Masson, 1993; Guidano & Liotti, 1983; Taylor, 2001) are considered that suggest that schemas are intrinsically linked with processes outside of conscious awareness. A brief overview is also given of empirical research from experimental psychologists (e.g., Williams, Watts, MacLeod & Mathews, 1997). These findings lend support to the argument that unconscious processes substantially affect people's psychological health and behaviour.

Chapter 1 also introduces Epstein's (1998) Cognitive Experiential Self-Theory (CEST), as one of the conceptual frameworks for this thesis. CEST helps

to place maladaptive schemas, as discussed by Beck (1976; 1996; Beck & Weishaar, 1995) and Young (1999) into a holistic global theory of personality. This theory includes processes outside of conscious awareness, termed the experiential system, along with processes within conscious awareness, termed the rational system. According to Epstein, the experiential system has the most influence on personality, health and behaviour. However, with regard to empirical research into the influence of unconscious maladaptive schemas, Beck and colleagues (e.g., Beck, 1976; Beck & Freeman, 1990), Young and colleagues (e.g., Schmidt, Joiner, Young, & Telch, 1995; Young, Klosko, & Weishaar, 2003), and Epstein and colleagues (e.g., Pacini & Epstein, 1999) have indirectly investigated these schemas via self-report measures and decision-making choices. Consequently, in this thesis a more direct identification of unconscious maladaptive schemas in the experiential system is sought.

Chapter 2 examines the different perspectives of the early childhood memory theorists - Adler (1941/1998), Mayman (1968), and Bruhn (1990b). These theorists contend that a person's current psychological problems can be identified by schemas and their associated affect that are revealed in his or her early childhood memories. Consequently, this type of self-narrative (early childhood memories) was chosen for the current investigation as a vehicle for accessing a person's unconscious maladaptive schemas and affect. Empirical evidence that supports the efficacy of using early childhood memories in accessing unconscious material is also discussed (e.g., Binder & Smokler, 1980; Bruhn, 1981, 1985, 1995; Fowler et al., 1995).

Chapter 3 presents the research aims and describes the participants, measures, procedure and coding of the early childhood memories for Study 1. The method section is followed by the results for Study 1. This includes an empirical analysis using polyserial correlations and Discriminant Function Analyses (DFAs) to investigate the types of maladaptive schemas currently represented in early childhood memories and their relationship with self-reported maladaptive schemas. These results are followed by qualitative examples of predictors from the early childhood memories that correctly identified people with high levels of self-reported maladaptive schemas.

Chapter 4 outlines the research aims for Study 2, and describes the participants, measures, procedure and coding system. This is followed by the results for Study 2. The data were analysed using polyserial correlations and Discriminant Function Analyses for each of the nine subscales of the Brief Symptom Inventory (BSI; Derogatis, 1993). Qualitative examples of predictors from individual's early childhood memories follow on from each DFA result that identified people with high levels of self-reported psychological symptoms. These early memories illustrate the wealth of information that is encapsulated in these narratives. There are clear issues, relationship dynamics (object relations), and maladaptive schemas that are revealed in the early childhood memories.

Chapter 5 provides a general discussion of the research findings from both studies. Briefly, it emerged that a small number of predictor variables that were present in the narrative of early childhood memories were associated with people in the groups with high levels of self-reported Maladaptive Schemas in Study 1 and Psychological Symptoms in Study 2. The findings support theories suggesting

that unconscious processes have a ubiquitous effect on psychological health. Finally, implications of the research findings for therapy, methodological issues, and future research are discussed. The next sections examine schema theories.

1.2 Beck's Theories of Schemas in Relation to Psychological Health

Schema theorists have proposed that schemas are related to maladaptive behaviour and psychopathology (Beck, 1996; Young, 1990). Beck was one of the most prominent pioneers of cognitive therapy and incorporated the notion of negative cognitive schemas being linked to dysfunctional cognitive processes. For example, almost 40 years ago, Beck argued that negative schemas had a positive relationship to depression (Beck, 1967; 1976). Beck suggested that people's affect and behaviour is based on how they consciously conceptualise their world and beliefs (Beck & Weishaar, 1995). He believed that it was the operation of maladaptive schemas that brought about self-defeating behaviour, and that by identifying the schemas and associated affect in therapy, the maladaptive beliefs could be reframed into a more constructive belief system that would rectify emotional disorders such as depression and anxiety (Beck, 1967; 1976; Rachman, 1997).

An underlying assumption of Beck's (1976) theory is that maladaptive schemas are linked with conditional belief systems that often perpetuate a maladaptive schema. For example, in order not to be abandoned by others a person may hold the (latent) belief that 'If I can always please others, I will not be abandoned'. Beck proposed that this sort negative schema (abandonment) distorts information in relation to the self and the environment, which leads to negative

automatic thoughts, about the self such as 'people do not love me', which is then often followed by subjective distress.

Kovacs and Beck (1978) postulated that painful childhood experiences such as the death of a close relative, or deprivation, are often instrumental in the formation and development of negative self-schemas and that these schemas may remain latent until triggered by similar feelings or circumstances. In this regard, Kovacs and Beck argued that memories are important as they reveal schemas that are not always conscious, but may influence reactions to present circumstances. For example, feelings such as loneliness may trigger schemas of abandonment. Early childhood memories may also reflect themes and associated feelings (affect) of a parent often not being available.

Affect that is linked with schemas has the function of producing feeling states that focus the individual's attention onto something that causes either pleasure or pain (Beck & Freeman, 1990). Beck and Freeman asserted that positive affect has an adaptive function of reinforcing pleasurable behaviour. In contrast, negative affect functions to keep a person focused on situations that diminish them in some way and is vital as an indicator of salient issues that are important to the individual. This view by Beck and Freeman (1990) goes beyond Beck's (1967) previous notions of affect as simply being an emotional experience or mood, devoid of meaning or links to previous difficulties. Therefore, rather than simply investigating moods or affect in isolation, Beck and colleagues (e.g., Beck & Freeman, 1990; Beck, 1996) more recently argued that these affective and meaningful 'indicators' can explain behaviour that was often left unexplained in Beck's (e.g., Beck, 1967) earlier and simpler model of psychopathology.

In a more recent version of his theory, Beck (1996) incorporated the interaction of related schemas in what he has termed modes. Beck defined modes as networks of affective, cognitive, behavioural and motivational schemas that work in a connected system. He also suggested that schemas in the cognitive system contain information that is relevant and meaningful to a person's self-concept, such as themes of self-worth. Most importantly in relation to this thesis, he postulated that such schemas are triggered together or in sequence and that this process is often out of conscious awareness.

The addition of non-conscious influences to account for psychopathology is a relatively new concept in cognitive psychology that traditionally had been the domain of researchers with a more psychodynamic orientation (Taylor, 2001). In recent times, Beck (1996) has argued that cognitive theories need to incorporate the relationship between conscious and non-conscious processing of information. However, even though Beck includes systems that are non-conscious in his new model, his writings predominantly focus on conscious processes such as modifying current thinking and behaviour (Beck & Weishaar, 1995). To date there has been little investigation of any unconscious cognitive influences within Beck's framework (Clark & Steer, 1996; McGinn & Young, 1996).

1.3   The Origins of Young's Maladaptive Schemas

Young (1999) acknowledges unconscious cognitive influences and has extended Beck's (1996) contribution in relation to the importance of maladaptive schemas and their impact on a person's psychological health. In Young's research, he investigated and defined a number of maladaptive schemas and

developed self-report measures (e.g., Young's Schema Questionnaire; YSQ; Young, 1990) to examine their importance.

Young (1994) developed his theory of basic maladaptive schemas after many years of working as a clinician with psychotherapy clients. His intention has not been to develop a competing theory of schemas but rather to extend upon earlier schema theories (e.g., Beck, 1976) by focusing specifically on what he terms the deepest level of cognition - the early maladaptive schemas (McGinn & Young, 1996). Young and colleagues refer to these deep cognitions that are often outside conscious awareness in the same way as psychodynamic theorists refer to unconscious processes. Therefore, these concepts of deep cognitions and unconscious processes are considered synonymous in this thesis.

In Young's model, deep cognitions are referred to as core schemas, or internalised themes, that usually develop in early childhood (Bricker, Young & Flanagan, 1993). In concordance with Beck (1996), Bricker et al. (1993) also argue that particular maladaptive core schemas result from unpleasant experiences in childhood, such as social isolation, abandonment or abuse from the primary caregiver/s. They agree with Beck that biology and temperament are involved to a certain degree in the development of maladaptive schemas. However, in contrast to Beck, and in accordance with developmental theorists, they focus on the role of parents, siblings and peers in relation to the development and maintenance of particularly debilitating maladaptive schemas.

There are four types of conditions in early childhood that Young et al. (2003) have recently outlined as facilitating the development of these debilitating maladaptive schemas. The first is the frustration of needs such as deficits of love

in the early environment. The second is traumatisation and the third is

victimisation experiences in early childhood. The fourth is an extreme

internalization or identification with significant others such as a parent. In this

case, the child internalises the parent's feelings, thoughts and behaviours and may

repeat the parent's patterns of behaviour themselves later in life.

The core or central maladaptive schemas that develop in the child become

entrenched in his or her sense of self and in his or her relation to the experience of

others (Young, 1999). Young has named these schemas 'Early Maladaptive

Schemas', and defines them as "extremely stable and enduring themes that

develop during childhood, and are elaborated on throughout an individual's

lifetime, and are dysfunctional to a significant degree. These schemas serve as

templates for the processing of later experience" (p. 9).

In contrast to Beck's notion (1976) that maladaptive schemas are

conditional, Bricker et al. (1993) initially indicated that they were all

unconditional. Young et al. (2003) revised this contention by including

conditional and unconditional schemas in their taxonomy of maladaptive schemas.

They defined unconditional schemas as beliefs and feelings about the self and the

environment that reside in a person as tacit (unconscious) knowledge and are the

first schemas to develop. These schemas are unconditional in that they are more

rigid than assumptions and also much more resistant to change, for instance, the

intrinsic belief that 'I am unlovable and I'll be abandoned'. Young (1999) and

others (e.g., Epstein & Pacini 1999; Guidano & Liotti, 1983; Liotti, 1989) suggest

that the reason for this rigidity is that it is usually too disruptive to the conceptual

system of the self to change some schemas. Therefore, schema content is maintained in order to provide a continuity of the self-concept (Young, 1999).

So far, Young et al. (2003) have identified 13 unconditional and five conditional maladaptive schemas. The five conditional schemas are Subjugation, Self-Sacrifice, Approval-Seeking, Emotional Inhibition and Unrelenting Standards. Young et al. (2003) believe that these schemas are secondary schemas. They are secondary because they develop to compensate for unconditional schemas. For example, Approval Seeking may develop in response to (or as a relief from) feeling Abandoned.

The healthy development of a child depends on optimal factors being present in the family and the environment such as love, care and safety (McGinn & Young, 1995; Young, 1999; Young et al., 2003). Young and colleagues claim that when positive factors such as the above are lacking in the child's experience that there is a higher chance of the child developing maladaptive schemas. They also claim along with other developmental theorists (e.g., Ainsworth, 1968; Bowlby, 1969) that the strongest and earliest maladaptive schemas usually stem from experiences in the nuclear family.

According to Young (1999), early maladaptive schemas are divided into five schema domains – Disconnection and Rejection; Impaired Autonomy and Performance; Impaired Limits; Other-Directedness; Overvigilance and Inhibition. These domains are outlined in the following section.

1.4   Young's Five Schema Domains

1.4.1   Domain One- Disconnection and Rejection

The Disconnection and Rejection domain is related to the child's experience of being cut off from healthy emotional and physical nourishment, initially from his or her primary caregiver/s. The child feels a lack of love, security and empathy from parents that eventually develops into a global lack of trust and of intimacy. These deficits are often construed by the individual as rejection and produce a sense of alienation by others. The child may also feel unlovable and as not belonging to a social group. Components of this domain can also be activated through neglect or loss, such as the death of a parent, or through experiencing being deceived, or physically or emotionally abused by either parents or peers (Bricker et al., 1993). In Young's Schema Questionnaire (YSQ; Young, 1999), this domain is measured via five subscales - Abandonment/Instability; Mistrust/Abuse; Emotional Deprivation; Defectiveness/ Shame and Social Isolation/Alienation. Importantly, Young et al. (2003) claim that the first four of these schemas are the most powerful and damaging of all the 18 maladaptive schemas.

1.4.2   Domain Two - Impaired Autonomy and Performance

The second domain, entitled Impaired Autonomy and Performance, incorporates schemas that are linked to feelings of a lack of independence and safety. In this respect there is an associated feeling of a loss of control over one's destiny and also an unhealthy dependency on other people for direction and support. There is also insufficient faith in one's own ability that leads to a perception of not being able perform successfully in the world. As with the other

domains, these feelings probably stem from experiences in childhood that undermined the child's sense of responsibility, control and safety. The family of origin of people who score high on this domain is often described as enmeshed, or over protective. This may have eventuated because of over protection of the child by the parent, or the opposite extreme of not enough direction or guidance by the caregiver/s (Soygut & Savasir, 2001; Young, 1999). The subscales of the YSQ (Young, 1999) in this domain include Dependence/ Incompetence; Vulnerability to Harm or Illness; Enmeshment/ Undeveloped Self and Failure. Young suggested that people in this domain find it difficult to function independently or be successful.

1.4.3   Domain Three - Impaired Limits

In contrast to the first two domains, a lack of restraint involving one's impulses and a lack of awareness of other peoples' needs is related to the Impaired Limits Domain. Children who have been constantly overindulged by caregivers in a permissive environment often develop schemas that involve insufficient self-control, accompanied by a feeling of superiority. Also, a lack of discipline often results in the inability to engage in a reciprocal relationship of give and take. The person feels special and that he or she has a free reign without limits or the awareness of the consequences of his or her behaviour. If these people are faced with defeat or the frustration of their desires, as a result of these types of behaviours, they often cope inappropriately (Bricker et al., 1993). An example would be a tennis player who smashes his or her racquet after losing a point. The subscales from the YSQ (Young, 1999) that are related to this domain include Entitlement/Grandiosity and Insufficient Self-Control/Self-Discipline.

1.4.4 Domain Four- Other-Directedness

When children have learnt to focus on other people's needs and feelings, especially those of their parents, at the expense of their own, they can develop schemas in the Other-Directedness domain. Frequently, these children have been unable to express their own needs or emotions because they fear the consequences, such as the imposition of guilt or reprisals, from their parents. The parents of these children often demonstrate conditional acceptance of their children. As a result the child can come to emphasise the parent's needs in preference its own. Young (1999) suggested that these children develop these strategies in the hope of gaining love and appreciation from their parents. As a consequence of sublimating their own feelings, children who develop schemas from this domain often suppress their anger. The subscales in the YSQ (Young, 1999) that are related to this domain include Subjugation; Self-Sacrifice; and Approval-Seeking/ Recognition-Seeking.

1.4.5 Domain Five - Overvigilance and Inhibition

The final domain, Overvigilance and Inhibition, incorporates schemas that are related to the suppression of feelings and urges. Children develop schemas in this domain as a result of experiences with parents who exaggerate duty, perfectionism and rigid rules while discouraging the expression of emotion and happiness. As a result, the child may become prone to unhappiness, a lack of affect, ill health, and feelings of tension and also tend to avoid pleasure and intimacy. The parents are also inclined towards worrisome and pessimistic attitudes. Their children try and earn the love of their parents by developing and trying to meet high expectations of themselves (Bricker et al., 1993). The

subscales from the YSQ (Young, 1999) that are included in this domain include Negativity/Pessimism, Emotional Inhibition, Unrelenting Standards/Hypercriticalness, and Punitiveness. Young (1999) argues that as a result of bad parenting, aspects of these domains form into particular schemas that intrinsically become part of the self (or self-theory) in childhood. These schemas extend into adulthood and are very inflexible.

The following section examines research using Young's (1990) early maladaptive schemas as these schemas were used in both Study One and Two of this thesis. In particular, studies are examined that have investigated reliability and validity of Young's measures. Also, empirical evidence that attests to early maladaptive schemas' links with measures of psychopathology is investigated.

1.5 Research on Young's Schema Questionnaire

Even though schema functioning is acknowledged and defined theoretically, there has been a paucity of research on the identification, development, and assessment of maladaptive schemas (Glaser, Campbell, Calhoun, Bates & Petrocelli, 2002; Segal & Muran, 1993). Studies by Young and colleagues (e.g., Schmidt, Joiner, Young & Telch, 1995; Young, 1990, 1994; Young et al., 2003) are an exception.

Most of the studies examining Young's early maladaptive schemas (e.g., Glaser et al., 2002; Schmidt et al., 1995) have investigated their association with the Brief Symptom Inventory (BSI; Derogatis, 1983). The BSI is a brief measure that assesses nine symptom dimensions such as Depression and Anxiety, along with an overall measure of psychological distress. It has been extensively used

with a broad range of samples in both clinical and counselling therapy settings

(Derogatis, 1993).

Schmidt et al. (1995) were the first researchers to investigate the factor

structure YSQ and its purported links to psychological symptoms and personality

disorders. Young (1990) had initially proposed 16 theoretical Early Maladaptive

Schemas (EMS) and these were represented in the Young Schema Questionnaire

(YSQ; Young, 1990). Using the YSQ (Young, 1990), Schmidt et al. (1995) factor

analysed data from a large undergraduate student sample ($N = 1,129$) in one study

and then a clinical sample ($N = 187$) in a second study. Schmidt et al. found

evidence to support the existence of the 16 schemas previously anticipated by

Young (1990). The schemas that emerged in both studies closely replicated the six

theoretical domains originally proposed by Young (1990).

In one of the student samples, Schmidt et al. (1995) identified 15 of the 16

hypothesised factors (Social Desirability did not emerge). In the second student

sample, twelve of Young's (1990) 16 theoretical factors emerged. Social

Undesirability; Social Isolation; Subjugation; and Entitlement items did not

emerge as separate factors, but loaded separately on conceptually similar schema

subscales.

In the clinical sample, 15 of the 16 factors emerged explaining 54 percent

of the variance, with Social Undesirability again not loading on a factor. Schmidt

et al. (1995) suggested that on the basis of the results from both studies, Early

Maladaptive Schemas can be taken to exist on a continuum from non-clinical to

clinical levels of a schema, as the non-clinical samples showed similar but lower

levels of schemas when compared with the clinical sample.

Schmidt et al. (1995) found that the YSQ (Young, 1990) demonstrated good convergent and discriminant validity with measures of self-esteem, depression, psychological distress and personality disorder symptomatology. In particular, the results of their study revealed a significant moderate positive relationship between the YSQ and the General Severity Index, a measure of overall psychological distress from the Symptom Check List Revised (SCL-90-R; Derogatis, 1992). Schmidt et al. found that when using stepwise regression, three of the YSQ subscales (Vulnerability to Harm, Dependence/Incompetence, & Insufficient Self-Control) accounted for 54 percent of the variance in the GSI (dependent variable).

When looking at Psychological Symptoms, the Depression subscale of the SCL-90-R was predicted by the YSQ subscales of Dependence/Incompetence and Defectiveness/Shame, which accounted for 33 percent of the variance. The anxiety subscale of the SCL-90-R was predicted by the Vulnerability to Harm, Dependence/Incompetence and the Emotional Inhibition subscales of the YSQ and explained 34 percent of the variance. On the basis of these results, Schmidt et al. suggested that the YSQ is a promising measure for research.

Research by Lee, Taylor and Dunn (1999) sought to replicate the findings of Schmidt et al. (1995) using a larger clinical sample ($N = 433$). Also, to determine whether there were similarities in schemas across cultures, Lee et al. used an Australian clinical sample, as the initial study by Schmidt et al. was completed in the United States of America. Lee et al. found that 16 factors emerged from the data that explained approximately 60% of the total variance. Fifteen of the original 16 factors predicted by Young (1990) were extracted, and

as with Schmidt et al.'s findings, Social Desirability did not emerge as a factor. The 15th and 16th factors that emerged contained items from the Emotional Inhibition (EI) schema. The 15th factor was linked to a Loss of Control, and the 16th factor to Emotional Constriction and were consequently labelled as such.

Lee et al. (1999) had postulated that non-clinical samples might not exhibit discernable levels of maladaptive schemas, which was in contrast to Young and Klosko's (1993) assumption that non-clinical samples would report early maladaptive schemas, albeit at lower levels when compared with clinical groups. A study by Shah and Waller (2000) settled the conjecture. They extended on Lee et al.'s (1999) study by using a clinical ($N = 60$) and non-clinical sample ($N = 67$) to investigate the YSQ's relationship with parenting styles and different levels of depression.

Shah and Waller found levels of early maladaptive schemas in the clinical and non-clinical groups. Using a Discriminant Function analysis, three key schemas from the YSQ (Young, 1990) were identified as predictors of depression. The early maladaptive schemas of Defectiveness/Shame, Self-Sacrifice and Insufficient Self-Control differentiated the depressed from the non-depressed group. The model correctly classified 88.3% of the depressed group and 89.6% of the comparison group using these three schemas. Shah and Waller (2000) also found that it was only when they assessed the deeper schematic level of cognition using the YSQ, as opposed to analysing dysfunctional assumptions or beliefs, that they found links between the schemas people held and depression.

In a follow-up study, Waller, Meyer and Ohanian (2001) found the YSQ (Young, 1990) to be valuable in differentiating women who were suffering from

Bulimia from a comparison group. In the case of eating disorders, it is believed that intolerable emotional states are blocked from awareness by bingeing (Waller et al., 2000). In accordance with Shah and Waller (2000), the researchers found that early maladaptive schemas were useful in differentiating clinical groups from non-clinical groups. Waller et al. used Discriminant Function Analyses to extract predictors that could differentiate the bulimic group from a non-bulimic group. They found that the bulimic group had higher levels of Defectiveness, lower levels of Self-Control and lower levels of Entitlement or feeling that they were deserving of good outcomes, when compared with the non-bulimic group.

The shorter version of the YSQ, the YSQ-S (Young, 1998) was also examined in Waller et al.'s (2001) study of Bulimia and compared to the longer version, the YSQ (1990). Young (1994, 1998) revised the schemas from his original YSQ (1990) on the basis of a factor analysis of the original YSQ scores. He developed a shorter form of the YSQ, the YSQ-S that contains 75 items, and attempted to retain the validity, utility and factor structure of the original YSQ, which contains 205 items. He ended up keeping 15 of the original 16 subscales (the Pessimism factor subscale was dropped). Waller et al. (2001) found that the YSQ-S had comparable psychometric properties to the longer version. They argued that the YSQ-S has the advantage of being an easier measure to complete, as it is approximately a third of the size of the longer version. Thus, it has less likelihood of error due to the fatigue or boredom that may accompany the longer version of the questionnaire.

Further examination of the construct validity of the shorter form of the YSQ-S (Young, 1998) was conducted by Glaser, Campbell, Calhoun, Bates and

Petrocelli (2002). They found that the briefer questionnaire was comparable to the longer version and that the YSQ-S demonstrated relationships with aspects of psychological distress as measured by the Brief Symptoms Inventory (BSI; Derogatis, 1993). For example, when all 15 of the subscales from the YSQ-S were used as predictors in a linear regression, they accounted for 54 percent of the variance in a measure of general distress, the General Severity Index (Derogatis, 1993). The YSQ-S also accounted for 49% of the variance in the Depression subscale of the Brief Symptom Inventory (BSI; Derogatis, 1993). In particular, the YSQ-S subscales of Abandonment, Social Isolation and Vulnerability to Harm were the largest significant predictors of Depression using a linear regression model.

Although there have been a limited number of studies investigating Young's (1990) maladaptive schemas, the results from these studies are exciting. They indicate that these deep cognitions have strong and influential relationships with psychological ill-health.

1.6   Summary and implications of Beck and Young's contributions

The more recent views of Beck (1996) include the important notion of connected schemas or modes that are interrelated with affect, cognitions and unconscious processes. These ideas set the foundation for Young's (1990) theory of the development of Early Maladaptive Schemas and his identification of 18 specific interconnected maladaptive schemas that make up five domains.

Young (1999) and Beck (1996) concur that early maladaptive schemas are formed from dysfunctional early childhood experiences and are processed as deep

cognitions that are often outside of conscious awareness. Young and colleagues

(Young, 1990, 1999; Young et al., 2003) are also in agreement with

developmental theorists who believe that it is the dysfunctional bonding or

attachment between the mother (or caregiver) and his or her child that leads to

dysfunctional behaviour and a maladaptive sense of self in the child that continues

into adulthood.

Research findings (e.g., Glaser et al., 2002; Schmidt et al., 1995) support

the utility of Young's maladaptive schemas through the effectiveness of both the

long (YSQ; Young, 1990) and short form (YSQ-S; Young, 1998) of his

questionnaires. Both measures have demonstrated a stable factor structure with

high levels of reliability and validity. Using these instruments, early maladaptive

schemas were found to reside in both normal and clinical samples, such as

depressed and non-depressed people (e.g., Shah & Waller, 2000). These measures

also provide a useful and needed assessment tool to evaluate underlying early

maladaptive schemas. However, researchers (e.g. Lee et al., 1999) also suggest

that more research is needed to investigate the YSQ's utility with other groups

other than clinical samples who have varying degrees of pathology. There are also

problems in relation to accessing maladaptive schemas that Beck and Young

argue are outside conscious awareness. This is examined in the next section.

1.7   Limitations of the YSQ

Some researchers (e.g., Hedlund & Rude, 1995; Segal & Muran, 1993)

question the capacity of paper and pencil tests to capture all aspects of schemas.

They suggest that people better reflect their sense of self through self-narratives or

memories because these methods go beyond simple fixed descriptions of schemas and provide information such as structural relationships within a self-structure. Young (1999) has outlined various ways of eliciting early maladaptive schemas other than through the questionnaires that he has developed. In particular, he has suggested that Early Maladaptive Schemas may be accessed through early childhood memories or through dreams. Beck (1996) also mentions that one method of accessing early maladaptive schemas is through early childhood memories. However, to date neither Young nor Beck has formally investigated early childhood memories as indicators of maladaptive schemas.

Both Young et al. (3003) and Beck (1996) acknowledged that schema formation and maintenance often operates at the level of 'deep cognition' that is outside of conscious awareness. Consequently, using self-report questionnaires, such as the YSQ (Young, 1990), to indirectly access maladaptive schemas that are considered to be latent or unconscious, is arguably a potential limitation in gathering information about what is affecting or troubling a person unconsciously (Hedlund & Rude, 1995). Put simply, unconscious maladaptive schemas may be different or more expansive than what is self-reported on measures such as the YSQ. In this regard, there is a need to access this information that is alleged by many psychologists such as Young or Beck to be outside of conscious awareness. Some psychologists, such as Epstein (1999), take this point further and argue that maladaptive schemas that are outside of conscious awareness are *the* most important schemas to access. The importance placed on unconscious processes that Epstein refers to has a long history.

1.8   The development and influence of unconscious schemas

Over one hundred years ago, pioneers of personality psychology, such as Freud (1901/1962) and Jung (1963/1983), based their theories on the dominance of the unconscious system in the formation of personality and its consequent influence on health and behaviour. Presently, a number of different terms such as 'implicit views', 'tacit self-knowledge', 'inferred or unarticulated knowledge', 'knowledge outside of conscious awareness', or 'unconscious knowledge', exist to describe what is referred to in this thesis as unconscious processes and information.

There are now a growing number of cognitive psychologists that acknowledge two main types of cognitive processing – one conscious and the other unconscious, in the formation of maladaptive schemas (Epstein, 1994). They (e.g., Epstein, 1994; Guidano & Liotti, 1983; Liotti, 1989) claim that maladaptive schemas form into conscious and unconscious views of oneself that are elaborated on throughout one's life and which may profoundly influence a person's personality, and affect his or her current functioning and relationship with others (Liese & Franz, 1997). These schemas are often imbued with emotion or affect and contain basic beliefs and conditional beliefs that are constantly reinforced by subsequent interactions (or a lack of them) with people throughout one's life (Liese & Franz, 1997; Liotti, 1989).

Although there is a general consensus among psychodynamic practitioners and theorists, as well as a number of cognitive psychologists, that behaviour may be profoundly influenced by cognitions that are not always directly accessible (e.g., Epstein & Pacini, 1999; Fowler, Hilsenroth & Handler, 1995, 1996, 2000

Guidano & Liotti, 1983; Mathews, 1997), it is in the area of experimental

psychology that unconscious processes have been examined systematically via

empirical methodologies. This research provides some of the most convincing

evidence of the influence of unconscious processes on current functioning

(Masson & Graf, 1993). The following section briefly outlines some of this

research. The intention here is not to provide an exhausting review of the area of

experimental studies into unconscious processes. Rather, it is to verify the

influence of unconscious processes using rigorous experimental procedures

whereby these processes were operationalised.

1.9   Support for Unconscious Processes from Experimental Psychology

There is a growing trend in experimental studies to acknowledge the role

of unconscious processes. This has mostly been due to the emergence of

innovative studies in the areas of memory, learning and perception (Taylor, 2001;

Williams et al., 1997). Researchers working in these areas have gathered evidence

that non-conscious processes operate in a different way to conscious ones and that

these processes inadvertently and profoundly affect the way people respond to

tasks (Masson & Graf, 1993; Taylor, 2001). The following section briefly reviews

some of the studies and their findings in the area of unconscious, or as more

commonly termed in the experimental literature 'implicit influences', on memory,

learning and perception.

In a review of the literature on implicit memory studies, Williams et al.

(1997) claimed that there is now convincing evidence that implicit memory

processes influence conscious experience. In defining implicit memory, Williams

et al. stated, "Memory may also function without awareness to retrieve past information which, without entering consciousness, can exert an effect upon our subjective experience and actions" (p.237).

There have been numerous studies of implicit memory over the past two decades (e.g., Bowers & Schacter, 1993; Mitchell, 1993; Nissley & Schmitter-Edgecombe, 2002; Reber, Knowlton & Squire, 1996). In many of these studies, participants are given prior exposure to stimulus information (e.g., word sets, complex patterns, or numbers), which can significantly affect performance on tasks that require processing of the same stimuli at a later time, without people reporting any conscious recollection of the initial stimulus exposure. Studies that employ methods that bypass conscious awareness of memory, perception, or learning, provide support for unconscious processes.

In Williams et al.'s (1997) review, they argued that previous studies that investigated unconscious processes, such as unconscious memory retention of material that participants had reported that they had consciously forgotten, was not strong evidence for the operation of unconscious processes. For instance, some studies (e.g., Jacoby & Dallas, 1981) reported that participants had successfully identified word sets at a second presentation, after enough time had elapsed whereby they reported having (consciously) forgotten the words from the first presentation. The researchers suggested that identifying words at the second presentation at a greater level than chance was evidence for the operation of unconscious processes. Williams et al. argued in their review that in these sorts of studies it was possible that some conscious recollection may have occurred, thus somewhat undermining the argument the unconscious processes were operating.

Nevertheless, extremely convincing evidence existed for the operation of non-conscious memory from people with profound organic impairments in conscious memory.

In order to clarify unconscious processes in memory, Shinamura (1993) reviewed dozens of studies that included people with profound conscious memory deficits. The participants in these studies had severely impaired conscious memory due to neurological conditions such as Korsakoff's syndrome, head injury or encephalitis. Consequently, they were very limited in their ability to learn new tasks. They failed most memory tests that require conscious access to memory. Therefore, using these people in studies of unconscious memory processes helped to control for conscious memory retention that was criticised in the earlier studies (e.g., Jacoby & Dallas, 1981). It was found that these people had preserved non-conscious memory that was equivalent to non-clinical samples. This was exhibited by correctly completing tasks such as word pairs (at a greater level than chance) after previously being exposed to a similar stimulus.

Even with complex tasks, Reber et al. (1996) found that people with profound amnesia had similar levels of implicit memory to people with normal memory. For instance, Reber et al. constructed a task that required both groups (impaired and normal memory) of people to forecast the weather by deciding which combination of four cards presented simultaneously in each trial, correctly predicted two weather patterns – rainy or sunny. Each card comprised a number of shapes and particular combinations of the four cards were presented on a computer program. The two groups were able to develop an implicit memory of the particular combination of cue cards by correctly (better than chance)

predicting the combination of cards that resulted in a certain type of weather. However, being an implicit memory task, both groups reported that they were not able to consciously recall the complex sequence of cards that determined a sunny or rainy weather outcome. Similar to Shinamura (1993), Bowers and Schacter (1993) suggest that rather than conceptualising memory as a single system, research findings such as those with clinical amnesiacs, demonstrate that implicit and explicit memory may operate from different areas of the brain and work as separate systems.

It appears that information is absorbed at an unconscious level regardless of age. A review of implicit memory literature through the lifespan by Naito and Komatsu (1993) concluded that explicit memory improved with age whereas there was little difference in recall performance in implicit memory tasks in the different age groups ranging from three years of age to adulthood. Their review suggests that unconscious memory retention does not depend on age and this finding has implications in relation to supporting Beck's (1996) contention that maladaptive schemas that form in the unconscious of children may be retained and influence behaviour throughout their lives.

The study of non-conscious learning or implicit learning in individuals with brain damage has also produced strong evidence for the operation of non-conscious processes. For example, Knowlton and Squire (1994) used an artificial grammar task that involved a large number of letter strings, which were developed using a synthetic grammar with its own set of unique rules. They found that brain impaired participants were able to correctly select the new letter strings that adhered to the synthetic grammar rules even though they were not able to

consciously report the rules of the grammar. The researchers also found that participants with brain injury, such as profound amnesia, were able to display equivalent learning results to people with normal levels of conscious memory.

There have also been extensive reviews of the research into non-conscious perception (e.g., Roediger & Srinivas, 1993; Williams et al. 1997). As with implicit memory findings, a powerful source of evidence of non-conscious perception comes from people who have brain damage, such as memory loss. For example, Nissley and Schmitter-Edgecombe (2002) found that participants who had sustained a serious closed head injury and had deficits in explicit memory (such as remembering shopping lists), had comparable perceptually based implicit learning processes to people with normal levels of explicit memory. Both groups of people searched visual matrices for a target. The location of the target had been pre-programmed to coexist with a certain configuration of complex number patterns. Both groups were also able to retain their implicit learning and correctly anticipated the position of the target (at a level greater than chance). However, an explicit knowledge test did not suggest a conscious awareness of any pattern by people in either group.

Research evidence suggests that stimuli reported as undetectable are processed at the semantic level. For example, in a study by Murphy and Zajonic (1993), either a sad or happy face was presented below the threshold of conscious perception simultaneously with a novel stimulus (such as Chinese letter character) that was consciously perceived. The results indicated that the subliminal pictures affected the degree to which the Chinese characters were described as significantly more pleasant (character presented with happy face) or not (character

presented with sad face), and that these affective responses were formed

unconsciously. This finding suggests that meanings and affect that are encoded at

an unconscious level may influence perception and behaviour. Given findings of

the ability of unconscious memories being absorbed at an early age (e.g., Naito &

Komatsu, 1993), this also suggests that early childhood memories that are

meaningful and include feelings, especially ones that stem from traumatic or

difficult experiences, may also unconsciously influence behaviour over the

lifespan. Therefore, "It is also highly probable that non-conscious perception may

make a functional contribution to clinical pathology" (Williams et al., 1999, p,

271).

In summary, research findings in the areas of implicit memory, learning

and perception, using participants that have brain damage in areas that severely

hinder or block conscious processes, is a powerful source of evidence for the

operation of unconscious processes that unwittingly influence conscious

behaviour. The research outcomes provide compelling evidence that unconscious

processes probably use different parts of the brain. Consequently, research

findings in these areas lend support to the dual processing models of

consciousness that suggests that two systems (conscious and unconscious) work

independently and influence feelings and behaviour over the lifespan (Graf &

Masson, 1993; Williams et al., 1997). Epstein (1980) has developed a cognitive

theory that encompasses conscious and unconscious process into a global

personality theory. His theory is outlined in the following section.

1.10 Epstein's Cognitive Experiential Self-Theory (CEST)

This section outlines Epstein's (1987) Cognitive Experiential Self-Theory (CEST) that incorporates conscious and unconscious processes in one model. This theory was used as a conceptual framework in this thesis to explain the importance of understanding the influence of maladaptive schemas. In this regard, Epstein argues that these schemas may operate unconsciously and have a ubiquitous influence on health and behaviour. Epstein suggests that knowledge of these schemas is essential if one is to understand why people behave and are affected in ways that are not consciously obvious.

1.10.1 Advantages of CEST

Epstein's (1987) model was adopted as a framework for this thesis, because, in contrast to previous models, it is a comprehensive model that includes cognitive, affective and developmental components in the formation and maintenance of schemas. Another important factor is that Epstein (1980, 1987, 1994, 1998) developed a dual processing model of consciousness that, unlike experimental psychological theories, emphasises the predominance of schemas in the unconscious (termed the experiential system). These schemas in the experiential system, particularly the maladaptive ones, are considered to have a greater influence on health and behaviour than conscious beliefs.

In the experiential system, Epstein (1994) claims that affect is intrinsically related to schemas. These schemas profoundly affect health, behaviour and perceptions. These ideas are similar to Young's (1999) who also contends that schemas form as deep cognitions and that they are usually associated with high levels of affect. However, Epstein (1994) has elaborated on Beck's (1999) model,

and McGinn and Young's (1997) ideas, by suggesting that schemas that operate in the unconscious aspects of personality are the most influential in affecting the behaviour of all people, not just the clinical population.

1.10.2 The Dual-Processing Aspects of CEST

Epstein (1998) developed his Cognitive-Experiential Self-Theory (CEST) as a holistic personality theory. CEST includes an information-processing model with two parts – the rational and the experiential - that work in parallel. Both are considered to be adaptive and to develop over the life span from different kinds of experiences. The rational system functions consciously. It primarily uses ideas and language, in combination with a person's use of logical rules, reason and judgement (Epstein & Pacini, 1999). Epstein and Pacini posit that the rational system develops beliefs that are drawn from an individual's conscious experience of themselves and the environment. These beliefs are considered to be explicit realities or constructs. Motivation in the rational system stems from conscious beliefs about a reasonable way to act that will result in certain ends (Epstein, 1998).

The experiential system has similarities to the unconscious in psychodynamic theories of personality, in that this part of the system is out of the control of the rational system or conscious awareness (Epstein, 1994). Cognitive processes in this part of the system involve visualization, fantasy, intuition and feelings, with emotion considered to be the driving force of the experiential system.

In contrast to the rational system's beliefs, the experiential system develops an implicit theory of reality, a self-theory, which constitutes a person's

personality (Epstein, 1987). Epstein believes that a person is motivated to maintain the stability and coherence of his or her self-theory as it is intrinsically connected to his or her identity. The building blocks of personality in the experiential part of the system are derived primarily from generalisations in the form of schema constructs. He suggests that although they are developed over a lifetime, the self-theory is particularly formed from schemas that are derived from emotionally significant experiences in childhood. Epstein believes that this is especially the case for very young children, as the rational system has not developed and the experiential system is very open to experiences.

Epstein's (1999) theory regarding the development of maladaptive schemas in early childhood is congruent with Young's (1999) ideas. However, Epstein postulates that maladaptive schemas develop in the experiential system and remain outside of conscious awareness (latent), but are assessable through means such as a person's self-narrative. Young et al. (2003) believe that early maladaptive schemas are the result of unmet core emotional needs, and can be triggered by difficult circumstances. Yet, they do not have a model that places these schemas anywhere in the way that Epstein does in the experiential system.

1.10.3 The Development of Schemas According to Epstein

According to Epstein and Pacini (1999), the first schemas develop around emotions as "preprogrammed tendencies to react in certain ways to critical life events of evolutionary significance" (p476). These schemas form into an organised and coherent system, and connections within this part of the system are made through associations, rather than through logical considerations (Epstein & Pacini, 1999). These ideas, or broad generalisations, then become fixed in the

personality as self-theories. These connected schemas also form a conceptual framework that enables a person to make sense of being in the world (Epstein, 1987). According to CEST, people develop implicit theories of reality that are constructed from the rational and experiential systems, although a person is unaware of these personal theories. They include a self-theory, a world theory and beliefs about the two (Epstein, 1980).

The development of schemas and associated networks is compatible with Beck's (1996) recent addition to his theory with the incorporation of non-conscious modes and also with Young's (1999) theory in relation to the development of schemas and their interconnections. However, Epstein has incorporated schemas into a broad theory of personality that further helps to explain the strength of their often unconscious influence on a person's current functioning.

1.10.4 CEST as a Holistic Personality Theory

Epstein and Pacini's (1999) overall system of CEST can be described as an integrative contemporary model of personality, drawn from a variety of theories of personality including, cognitive, psychoanalytic, phenomenological, object-relations, and Adlerian. In contrast to most personality theories that postulate a single fundamental need, Epstein and Pacini (1999) contend that people have four basic needs. The first need, which comes from a Freudian perspective (e.g., Arlow, 1995; Freud, 1901/1962), is to achieve pleasure rather than pain. A person is believed to be motivated towards maximising pleasure and minimising pain. The second need is related to phenomenological ideas such as those of Raskin and Rogers' (1995) in that the individual endeavours to maintain

stability and a coherent conceptual system of the self and others. The third, which stems from object-relations theory (e.g., Goldenberg & Goldenberg, 1995), is the need to maintain relatedness or relationships with other people. The last fundamental need is to maintain self-esteem. The importance of this need stems from theorists such as Adler (1941/1998; Mosak, 1995).

Theorists such as Maslow (1968) postulated that needs are arranged in a hierarchy. In his well known classical model, he outlined that people are motivated to fulfill certain needs such as the need to feel as though they belong, before they can fulfill the next need in the hierarchy, which was the need for self-esteem. In contrast, according to CEST, there is no hierarchy of needs. Behaviour may be influenced or shaped by any combination of the basic needs. Fundamental beliefs, which are formed in the rational system, center on the fulfillment or lack of fulfillment of one's needs. Consequently, the experience of the world may be perceived as either more pleasurable or more painful; the self and others are considered to be more stable or more chaotic; relations with others are perceived as either more supportive or more threatening; and the self is seen as either more worthy or more unworthy; depending on one's life experiences (Epstein & Pacini, 1999).

Epstein (1998) argued that for most people, needs work in a kind of homeostatic system or feedback loop. If one need is fulfilled while another is neglected, the balance becomes restored as the frustration of the neglected need increases and thus, in turn, becomes attended to. However, if a particular need becomes so dominant that the fulfillment of the other needs is neglected, Epstein suggests that this may result in maladaptive behaviour. For example, if someone is

excessively motivated towards the need to fulfill his or her own pleasure in a self-centered or selfish way then the need for relations with others may become dysfunctional.

The development of maladaptive behaviour stemming from a lack of one's basic needs being met (Epstein & Pacini, 1999) is congruent with Young's theory in relation to the development of Maladaptive Schemas (1999). For example, schemas from Young's Disconnection and Rejection Domain, which comprises schemas of Abandonment; Emotional Deprivation; and Mistrust/Abuse would negatively impact upon all four of Epstein's basic needs. The need for pleasure would decrease by increasing the emotional pain of being rejected or abused. The need for stability and a coherent conceptual system of the self and others would most likely be compromised by feelings of mistrust or deprivation. The need for relatedness or relationships with other people would most likely be lacking due to feeling of abandonment by one's significant caretakers. Also, the need for self-esteem would most likely decrease with feelings of not being worthy enough to be looked after properly. The impact of maladaptive schemas and the lack of one's basic needs being met would most likely result in dysfunctional thoughts and behaviour.

1.10.5 *The Influence of Affect and the Unconscious According to Epstein*

Epstein (1998) posited that when emotionally activating events occur, the experiential system matches or links the experience with past feelings from similar circumstances. The emotions are then augmented by linking to interpretations of previous events, which are stored in the experiential system and that have aroused similar emotions in the past. In this regard, the system is

believed to be adaptive, as there is an intrinsic motivation to integrate important

emotional experiences into the conceptual whole of the experiential system.

Behaviour is believed to be the product of both the rational and

experiential systems, with varying contributions from either or both sources.

However, as the experiential system is entwined with experience, and implicitly

related to affect, it is believed to be more powerful than the rational system in

terms of its subliminal and pervading influence on behaviour and psychological or

physical health (Epstein, 1998; Epstein & Pacini, 1999).

1.10.6 The Function of Descriptive and Motivational schemas in CEST

According to Epstein (1987) schemas that develop in the experiential

system are of two types, descriptive and motivational. The descriptive schemas

are formulated around notions of what the self and the environment are like and

incorporate the core beliefs, such as, "my partner is trustworthy" or "I am

basically worthy". Motivational schemas are intrinsic beliefs about means and

their consequences, such as, "If I try hard enough, I will reach my goal". For a

person to act, there needs to be the anticipated effect that stems from this means

and end relationship. The unique match that is made from past events from similar

situations determines the type of action that ensues. If negative or unpleasant

feelings are elicited, the rational part of the system can be activated with thoughts

and behaviours that facilitate avoidance of these unpleasant feelings that stem

from the experiential system's match with previous negative experiences.

Experiences that cannot be ignored or integrated by the self's conceptual schemas

continue to intrude into consciousness until this material is incorporated into the

system (Epstein & Pacini, 1999). This suggests that unpleasant experiences that

are not integrated into the system in the form of Maladaptive Schemas would be accessible and would also be an important indicator of issues that are affecting the person's current well-being.

1.10.7 Maladjustment and Dysfunction in CEST

Maladjustment or dysfunctional behaviour can occur because of various sorts of difficulties with schemas in the rational or experiential system. if the system is unable to assimilate conflicting material from the experiential system into the rational system. The material can become disassociated, or in psychodynamic terms, repressed. For example, if the experiential system has a core belief or schema such as 'My world is a safe place', an experience such as being present during a violent bank robbery can put the rational and experiential systems into conflict (Epstein, 1987). Similarly to Beck (1976) and Young (1990), Epstein suggests that dysfunctional thought, or behaviour, may also eventuate if there is a failure to have one's fundamental needs met, especially in childhood. For example, if the child is starved of emotional nurturance from the mother, he or she may develop a schema of unworthiness and abandonment. Additionally, maladaptive thoughts or behaviour may stem from schemas becoming too rigid rather than adaptable (Epstein, 1998). For example, a person may develop a rigid schema that they will only be loved and accepted if he or she fulfills certain conditions, such as succeeding at school.

The inner conceptual frameworks (or network of associated schemas), often determine what an individual seeks out and how he or she interprets life experiences (Epstein, 1980). For instance, a child's feeling of being loved, especially by a parent figure, is of vital importance to the child's emotional

wellbeing and to the development of schemas that make up the personality

(Epstein, 1999). According to Epstein (1997; 1998) it is in the experiential system

that the pervasive influence of maladaptive behavioural tendencies reside. Epstein

has endeavoured to back up his theoretical claims in relation to the influence of

schemas in the experiential system, with empirical evidence.

1.11 Research on the Principles of CEST

Epstein and his colleagues have developed an empirical base to gather

support for the underlying principles of CEST (e.g., Epstein, 1994; Epstein,

Pacini, & Denes-Raj, 1996; Kirkpatrick & Epstein, 1992; Pacini, Muir, & Epstein,

1998; Morling & Epstein, 1997). These include experiments in decision-making

that draw on studies of heuristics to try and differentiate the different types of

operating systems, and self-report questionnaires that were designed to access the

two operating systems (e.g., Epstein, Pacini, Denes-Raj & Heier, 1996;

Klaczynski, Fauth & Swanger, 1998; Kirkpatrick & Epstein, 1992). Epstein and

colleagues also studied the influence of emotion on the experiential system and

relationships between the experiential system and health and the self-concept. The

findings from these studies and issues that arise from Epstein's interpretation of

these results are examined in the following section.

1.11.1 *Heuristics and their Purported Link to the Experiential System*

The cognitive theories of Tversky and Kahneman (1974) were some of the

earliest to propose two common forms of cognitive processing – an intuitive and a

logical mode that operate according to different rules. These modes are congruent

with Epstein's (1999) experiential and rational systems. Kahneman and Tversky

(1973, 1982, 1996; Tversky & Kahneman, 1974, 1980) used the concept of heuristics to illustrate the way these different modes operate.

Kahneman and Tversky (1996) define heuristics as cognitive shortcuts that facilitate making choices among alternatives. In the case of the availability heuristic, people may infer the number of times something will happen based on how readily it comes to mind. For example, in relation to making judgements about the prevalence of suicides in a community, a person who used the availability heuristic would draw on the number of cases of suicide that immediately came to mind from his or her own life experience. This sort of heuristic is often implemented to make decisions and Kahneman and Tversky (1996) claimed that this was evidence of the intuitional system working rather than the rational system. However, Epstein et al. (1996) have argued that Tversky and Kahneman were not always clear whether heuristics demonstrate the operation of a separate system or whether they were just separate decision-making strategies within one rational system.

Epstein and colleagues (e.g., Epstein et al., 1996; Kirkpatrick & Epstein, 1992) attempted to develop experiments that would place both the rational and experiential system in opposition with the presumption that this would illustrate both systems in operation. According to Epstein, Lipson, Holstein and Huh (1992) traditional cognitive psychologists explain irrational decision-making by suggesting that humans have a limited information-processing ability. Thus, people often use cognitive shortcuts, or heuristics to solve everyday problems and these cognitive shortcuts occur within a single conceptual system.

Kirkpatrick and Epstein (1992) argue an alternative position. They claim that there are two distinct information systems that operate in parallel and that people can be aware of both systems operating. Epstein and Pacini (1999; Epstein et al., 1996) claim that results from their studies of heuristics provide evidence of the operation of two systems or two modes of reasoning. They also propose that their research demonstrates that heuristic processing is linked with the experiential system and is often favoured over rational processing in particular circumstances where equally accessible outcomes are available. They argue that this is the case even when people are aware of both systems operating at the time of making a decision (Epstein & Pacini, 1999).

By setting both modes (experiential & rational) in opposition to each other, Pacini and Epstein (1999) contend that it is possible to analyse both systems separately. Kirkpatrick and Epstein (1992) constructed a study to examine these questions. Participants were given the opportunity to win money by selecting a particular coloured token from a choice of two bowls. One bowl had a larger number of tokens when compared to the other bowl. The odds of choosing a winning token were one in ten and were exactly the same from either bowl.

Kirkpatrick and Epstein (1992) found that most participants' judgements were influenced by a numerosity heuristic in that more people chose from the bowl with a larger number of tokens. Kirkpatrick and Epstein suggested that the findings support some of the principles of CEST. For example, most participants felt more compelled, or driven, to operate from their intuitive or experiential system by choosing from the bowl with more tokens, rather than their rational one whereby participants would have indicated that there was no difference in

selecting a winning token from either bowl. They claimed that these results

indicate that people in real life situations predominantly use their experiential

system in making decisions, in preference to their rational system. They also

believed that the findings demonstrate that the experiential system operates with

concrete symbols, in this case the number of tokens, and heuristics. From their

point of view, there was clear evidence that supported the CEST that the

experiential system dominates over the rational system. People were aware of

both systems operating but tended to favour irrational (experiential) decisions

while recognising it was irrational. That people were aware of two systems

operating, tends to support Epstein's (1994) theory that heuristics in this case

demonstrate that more than just a cognitive shortcut was operating.

Kirkpatrick and Epstein (1992) also assert that the experiential system uses

heuristics that interrelate with other cognitive processing. Research by Epstein,

Lipson, Holstein and Huh (1992), demonstrated the associative links of heuristic

cognitive processing in the experiential system. In a study where participants were

asked to evaluate behaviour that came before an unfortunate outcome (e.g.,

someone just missing an aeroplane flight after being delayed on the way to the

airport in a traffic jam), most people evaluated the behaviour prior to leaving for

the airport (the person was dawdling), as foolish. They evaluated the behaviour

this way even though the person had left home at the appointed time and the

traffic jam on the way to the airport that caused the delay was not the person's

fault, or under his or her control. When respondents were asked to express what

first came to mind, it was clear that they had a sequence of thoughts that

demonstrated the associated connections that were made between the dawdling

and missing the plane, especially in a scenario where he or she had missed the plane only by five minutes. According to Epstein et al., the experiential system used fast cognitive processes (heuristics), which are often adaptive (e.g., being upset at something out of the ordinary that interferes with your plans), but can also be limited.

In contrast, when participants were asked to respond from a rational viewpoint, they suggested that dawdling before the time to leave was not the cause of missing the plane. This response demonstrated that the rational system, when there is time available, is usually able to process abstract cause and effect notions, such as realizing that dawdling could not have prevented the traffic jam and consequently missing the aeroplane flight (Epstein et al., 1992). In accordance with Kirkpatrick and Epstein's (1992) findings, Epstein et al.'s results also demonstrate that the experiential system is pervasive in its ability to override the rational system. It was also noted that most people are aware that they can switch from one system to the other at will, but tend to favour their intuitive experiential response and in this case counterfactual thinking such as 'if only I had left for the airport earlier'.

1.11.2 The Influence of Emotion in the Experiential System

Another important finding by Epstein et al. (1992) was that the influence of the experiential system is stronger when an outcome is manipulated to be more emotionally engaging. For example, in one scenario, a person on an average income moved shares from one company into another. Whether the shares gained in price, or lost value, was out of the control of the trader. The person learnt afterwards that if he or she had left the shares where they were that he or she

would be $100,000 richer (condition 1) or $500 richer (condition 2). As expected, respondents felt that they would feel much more foolish in condition 1 when compared with condition 2. However, the intensity effect was drastically reduced when one group of respondents was asked to respond in a rational way and to decide who actually behaved more foolishly in terms of bringing about the unfortunate outcome. The findings supported Epstein's (1980) view that affect can accentuate the influence of schemas (unconsciously) in the experiential system.

Many other studies by Epstein and colleagues (e.g., Epstein, 1987; Epstein & Katz, 1992; Katz & Epstein, 1991; Pacini & Epstein, 1999; Pacini et al., 1998) have also demonstrated the pervasive influence of emotions (such as negative affect) in the experiential system and its association with physical as well as psychological health. For example, Katz and Epstein (1991) found that people who had difficulty coping with solving every day problems (designated as 'poor' constructive rational thinkers) had more physical and emotional symptoms in daily life than 'good' constructive (rational) thinkers. In Katz and Epstein's (1991) study, the participants completed two tasks to induce stress. The first task required the participants to count backwards aloud by 7's from 300. The second task required tracing a line within a reflected mirror image. Physiological measures were taken immediately after the task along with self-report measures of affect and dysfunctional thinking. Finally, the researchers provided a guided relaxation period of a few minutes. Although both groups of thinkers performed equally well on the task, the poor rational thinkers had more negative affect, appraised their performance more poorly, were more stressed, and thought that

they had made an unfavourable impression on an examiner when compared to the good rational thinkers. Poor rational thinkers' negative thinking was focused on the self (rather than others) during the stressful part of the experiment. However, they did not report negative thoughts during the relaxation period of the experiment, but paradoxically, they showed more physiological arousal (anxiety symptoms) than the constructive thinking group at the same phase of the experiment.

As there was evidence of stress (physiological) without conscious awareness, Katz and Epstein (1994) posited that for 'poor rational thinkers', negative thoughts are prevented from coming to consciousness (repressed) and are diverted to the (unconscious) experiential system. These suggestions are consistent with CEST (Epstein, 1994) and experimental psychologists' research (e.g., Murphy & Zajonic, 1993) that found that unconscious processes affect people at the semantic level and that at least two systems (conscious and unconscious) work independently and influence feelings and behaviour (Graf & Masson, 1993; Williams et al., 1997). However, to more fully understand what was happening to the 'poor constructive thinkers' there would need to be a more direct examination of the schemas in each individual's experiential system.

1.11.3 Self-Report Studies of Experiential and Rational thinking

To investigate difference between people who operate more from one system than the other, Epstein (1994) developed a self-report measure of rational and experiential thinking (e.g., Epstein, Pacini, Denes-Raj & Heier, 1996; Pacini & Epstein, 1999). The two scales (Pacini & Epstein, 1999) were related to conceptually similar constructs. For example, people with high levels on the

rationality scale who were defined as being able to think logically and analytically, had associated high levels of positive adjustment that were indicated by low levels of neuroticism and higher levels of coping in comparison to people with a lower rational score.

In contrast, people with high levels of experiential thinking styles (intuitive and feeling types) who were defined as being able to rely on and enjoy their intuitive impressions and feelings, tended to have strong positive relationships with levels of emotional expression. They also had associated higher scores on a self-report measure of secure relationships (i.e., they endorsed being able to establish warm, meaningful relations with others) when compared with people with lower scores on the experiential scale. As well as being associated with similar constructs, Epstein et al. (1996) found that the two scales were independent (orthogonal) when analysed using factor analysis, which he claimed supported the notion of the operation of two separate systems. However, associations between rational thinkers and adjustment, or experiential thinkers and secure relationships, may only be describing different cognitive styles of thinking, rather than the operation of two systems.

1.11.4 Support for the CEST Principle of the Maintenance of a Self-Concept

Epstein (1992) and Epstein and Meier (1989) claimed support for the CEST notion that people tend to maintain or perpetuate their self-concept. For example, in a study of people who considered themselves as poor constructive thinkers with a low ability to solve daily problems with a minimum of stress, Epstein (1992) found that they tended to develop and maintain negative self-views and to make unfavourable exaggerations about themselves after unfortunate

experiences. Epstein believes that people are often motivated towards these negative views of self, at the expense of enhancing self-esteem, for a number of reasons.

One of the explanations that Epstein (1992) offered, was that as a child the individual regards him or herself as inferior, as a result of feeling unworthy of love (e.g., parents withdrew love or care). Once the schema of inferiority develops, new experiences are assimilated through the lens of this schema into what appears to be an irrational overgeneralisation of a negative self. The individual then believes that the self-assessment is accurate and tends to avoid more pain rather than seek pleasure. Epstein (1992) also found that people who defined themselves as poor general copers tend to hold low expectations about themselves and their future success and pleasure. He suggested that these people have a vested interest in holding onto these intrinsic self-beliefs, thus maintaining their self-beliefs. It also avoids the pain of possible rejection, failure and frustration that may have come with being successful in the future.

According to Epstein (1992), these negative self-beliefs are processed and encoded as maladaptive schemas that are linked with the self-concept. These assumptions are consistent with similar postulates by Beck (1996) and Young (1999). They propose that early emotive and particularly difficult experiences are very influential in the development of maladaptive schemas and dysfunctional relationships and that people tend to maintain these schemas as they are consistent with their self-concept.

However, there are difficulties with relying on self-report measures of negative self-beliefs as Epstein (1992) posited that negative schemas can reside in

the experiential system, while at the same time, opposite beliefs might be held consciously and reported by rational system. This suggests that information from the conscious rational system, such as from self-reported questionnaires needs to be treated with caution as it may only provide some of the information about a person that may not concur with information from the experiential system. Additionally, Epstein (1999) states that maladaptive schemas in the unconscious system (experiential) can often override conscious rational beliefs automatically. He indicates this is especially so for self-beliefs in times of stress and emotional upheaval. Therefore, it is also likely that maladaptive schemas are more difficult to access using rational conscious methodologies, as almost by definition self-report questionnaires reflect rational rather than experiential processing.

1.11.5 *The Experiential System and Indications of Psychological Health*

It is argued here that there may be a potential problem in relying on self-reported questionnaires as indicators of experiential information. However, Epstein and colleagues (e.g., Epstein et al., 1996; Pacini & Epstein, 1999) used self-report measure of experiential and rational thinking and found that these measures were related to psychological health (e.g., Pacini & Epstein, 1999; Pacini et al., 1998) and concepts of self (e.g., Epstein et al., 1996; Klaczynski et al., 1998). Yet, similarly to Beck (1996) and Young (1999), Epstein clearly states that maladaptive schemas that are associated with the experiential system and influence health and wellbeing are outside of conscious awareness. Therefore, similarly to Beck and Young, Epstein considers that self-report measures can signify information that is considered outside of conscious awareness.

For example, Pacini et al. (1998) claimed to investigate the influence of the rational and experiential systems on specific health issues using self-report questionnaires. They reported that mild to moderately depressed college students tended to have lower rational processing levels and higher maladaptive experiential processing levels on a decision making task than a non-depressed comparison group. The depressed students reported more negative self-notions (schemas) about themselves, the world and the future when compared with the non-depressed group. The implications of their findings are that negative schema constructs that develop in the experiential system may affect the health of individuals, however, it is argued that a self-report measure of levels of experiential thinking is not necessarily the same as information that is from the experiential system.

In this regard, Woike, Mcleod and Gogin (2003) agree. They believe that when analysing why people behave in certain ways, methods are needed that reveal conscious and unconscious information. For example, in their study on motivation they found that an understanding of a person's motives are generally restricted by the particular focus of self-report measures. In contrast, they found that unconscious or implicit motives that were represented in autobiographical memories presented a range of specific experiences that revealed additional information about the person's present motivations that he or she was not consciously aware of. The implicit or unconscious information was more often found to be different to explicit or conscious self-reported information.

It is not argued in this thesis that self-report measures do not provide useful information. Rather, it is argued that methodologies that access

psychological material purported to be associated with experiential (unconscious or implicit) processes (e.g., Epstein et al.1996, 1998) is also necessary. This information may reveal more about psychological dysfunction such as depression than a self-report measure exclusively, and may contribute to a more holistic psychological diagnosis of a person than relying solely on information from self-report questionnaires.

1.12 Summary of Chapter 1

Chapter 1 has argued for the value of examining maladaptive schemas when investigating psychological influences on a person's behaviour. These schemas are believed to be important to examine, as they depict fundamental ways in which a person views themselves, his or her environment, and others. Empirical evidence (e.g., Lee et al., 1999; Petrocelli et al., 2001) supports the utility of Young's (1990) maladaptive schemas and also confirms their relationship with psychological ill health. However, while (Beck, 1996) and Young et al. (2003) indicate that maladaptive schemas may operate unconsciously, the value of the CEST model (Epstein, 1980) for this thesis is that it emphasises the importance of examining unconscious schemas processed in the experiential system. Epstein (1999) contends that schemas that are processed in this system are the most influential in relation to personality, psychological health and behaviour. However, Epstein and colleagues (e.g., Denes-Raj & Epstein, 1994; Pacini & Epstein, 1999) have mainly described the operation of two processing systems from studies of heuristics, and self-report measures that identify links with other similar constructs, rather than examine the contents of the

experiential system. Beck and Young also used self-report measures in their empirical research of maladaptive schemas even though they recognised the substantial influence of unconscious maladaptive schemas.

It is argued in this thesis that a more direct investigation of unconscious maladaptive schemas in the experiential system may provide a broader understanding of people's psychological problems than by using self-report measures exclusively. Although empirical research by Beck (1996), Young (1999), and Epstein (1994) did not use methodologies that directly accessed unconscious maladaptive schemas, they all mention the potential of accessing unconscious schemas through examining early childhood memories. Early childhood memory theorists (e.g., Adler, 1956; Bruhn, 1985, 1990) believe that, as well as identifying important unconscious information, early childhood memories also have a projective function in that the memories may also reflect current difficulties. Chapter 2 focuses on the development of early childhood memory theories and examines the empirical evidence that supports the value of examining the unconscious material represented in early childhood memories and their relationship to psychological health.

CHAPTER 2

EARLY CHILDHOOD MEMORIES AS INDICATORS

OF UNCONSCIOUS MALADAPTIVE SCHEMAS AND

PSYCHOLOGICAL HEALTH

This chapter introduces theories of early childhood memories and argues for their compatibility with Beck (1999), Young (1999) and Epstein's (1998) indications that maladaptive schemas that affect psychological health function largely outside of conscious awareness. These theorists have also postulated that schemas can be accessed through reports of early childhood memories.

Early childhood memories were chosen for examination in this thesis as they have been conceptualised by early childhood memory theorists as unconscious filters that encapsulate vital psychological information (e.g., Adler, 1956; Bruhn, 1985; Mayman, 1968) in relation to a person's psychological problems. Previous research into early childhood memories (e.g., Bruhn, 1981, 1985; Mayman, 1968; Shedler, Mayman & Manis, 1993) provide examples of accessing information about maladaptive schemas and also offer empirical evidence to support the validity of early childhood memories as a psychological assessment tool. Chapter 2 begins with a description of the development of early memory theory by Freud (1901/1962) and Adler (1929/1971) and then discusses Bruhn's (1985) contemporary early memory theory. This is followed by a review of the empirical research that supports the utility of early childhood memories to

reveal a person's unconscious maladaptive schemas and their links with current psychological health.

2.1 The Development of Early Childhood Memory theories

2.1.1 Freud's View of Early Childhood Memories

Freud (1901/1962) claimed at the beginning of the last century that unconscious drives or latent concerns determine a person's current motives and behaviour. He suggested that these repressed elements are concealed in such things as dreams, or early childhood memories, otherwise referred to as screen memories because of the often taboo nature of the material in the memory. Freud (1901/1962) believed that screen memories are a cover for other more potentially distressing information that is repressed.

Freud (1901/1962) mostly viewed early childhood memories as stemming from an actual occurrence (an historical artifact) that related to a psychosexual developmental stage. Thus, he believed that these memories were from and about the past. He discussed the usefulness of educing screen memories in therapy and referred to them in a similar way to dreams, in that they can be interpreted for their latent content by the therapist (Freud, 1917/1955). However, as Bruhn (1990a) indicated, Freud tended to use projective methods such as word associations and the analysis of dreams to try and uncover his client's underlying unconscious concerns rather than the analysis of early childhood memories in particular. According to Bruhn (1990a) and Fowler et al. (2000), Freud's shift of focus away from using early childhood memories in therapy was probably due to his belief that memories from particular developmental stages (such as the

Oedipal stage) are distorted and disguised to protect the person from becoming overwhelmed by the early memory's murderous content.

2.1.2 *Adler and the Importance of Early Childhood Memories*

Alfred Adler was in the vanguard of early childhood memory analysis and a contemporary of Freud (Adler, 1956; 1965; 1929/1971; 1941/1998; Dreikurs, 1953). He believed that the "significance of early recollections is one of the most important discoveries of Individual Psychology" (Adler, 1930, p. 179). Whereas Freud (1901/1962) had indicated that early childhood memories concealed information (infantile amnesia) and were a product of and about the past, Adler (1941/1998) believed in a more literal interpretation of the memory. He believed that early childhood memories reflect the most valued or meaningful current tendencies and life goals of an individual.

According to Adler (1965; 1928/1974), early childhood memories reveal the psychological 'lifestyle' that people live by, and for this reason, these memories are always noteworthy in revealing important information about individuals. For example, Adler (1965) recounted an early childhood memory of a person suffering from manic-depression who recollected being angry when his mother died and wondering how his mother could leave him all alone. According to an Adlerian assessment, this memory reveals this person's current attitude that his needs are not met and that people abandon him, even those close to him. Adler recounted that this man's adult life reflected a lack of fulfillment of his needs from people.

From Adler's (1965) point of view, people's current goals and behaviours determine what is remembered. Therefore, he considered that early childhood

memories are central to the understanding of personality as they are related to the psychological structure of a person. However, Adler (1941/1998) cautioned that early childhood memories are not necessarily actual accounts of past experiences. Rather, they are current thematic representations of a person's typical dilemmas. They may even indicate strategies that the person implements to deal with life's problems. He also believed that if a person's attitude changes by means such as therapy, then it would follow that his or her early memory would change accordingly.

As far as Adler (1956, 1928/1974, 1941/1998) was concerned, early childhood memories are constructed from past events that especially fit with an individual's present feeling state. Adler (1965) recognised that these memory constructions are important projective material, in that the individual reports what he or she considers to be an actual event, often without realising that the memory was constructed from unconscious material that reflects present psychological circumstances. In accordance with Freud's (1901/1962) view about affective or emotional attitudes in dreams, Adler (1928/1974, p. 49) believed that the "feeling tone" (affective content) that is revealed in early childhood memories, more closely resembles the real meaning of the memory, rather than the figurative or verbal content. Assigning emotion as a key indicator of meaningful experiences is consistent with Epstein and Pacini's (1999) contention of emotion being the driving force in the experiential system.

In contrast to Epstein's (1999) view of the prominence of the unconscious or experiential system as the seat of maladaptive schemas, Adler believed that unconscious aspects of the self are those parts of the self that are not consciously

understood and to a degree affect a person's underlying (unconscious) sense of self (Mosak, 1995). Adler tended not to refer to 'the unconscious' as a noun but rather as an adjective that was equivalent to things about the self that are not understood (Sonstegard, Bitter & Pelonis, 2004).

The conscious and unconscious were considered by Adler to be a unified system that is directed towards a person's goals (Mosak, 1995). This notion of a striving towards congruence between the unconscious and conscious system corresponds with Epstein's (1999) unified self-theory. Epstein believes that a person is motivated to maintain the coherence of his or her implicit (unconscious) self-theory with his or her explicit self-theory, as it is intrinsically connected to a person's identity. This is not to say that there are no mismatches between the two systems but rather, according to Epstein, incongruence indicates that there are psychological problems.

From Adler's (1956) point of view, as the two systems were working towards a person's goal in life, it was important to understand this goal, and how the person construed his or her world. Adler and Adlerians agree that the way people construct their world is related to their sense of self and the style of life that they live by (Ansbacher & Ansbacher, 1964). In this regard, one of Adler's (1930) great contributions was that he claimed that this information could be succinctly revealed through analysing the information embedded in early childhood memories.

As a result of Adler's influence, Adlerians have used early childhood memories to assess the psychological life-style and goals of individuals and the development of their social interactions. However, Bruhn (1990a) claimed that

even though it is 70 years since Adler discussed his theory, his method of interpretation "never caught on broadly with individuals who did not accept his theory of personality" (p. xvi). It seems that the incorporation of either Freudian or Adlerian views when analysing early childhood memories will depend on the beliefs and perspective of the researcher. For example, although Adler (1929/1971) recognised unconscious information, he did not claim that this information revealed the cause of a person's problems. Rather, he indicated that memories pinpoint a person's main current psychological difficulties or attributes.

2.1.3   Mayman's Bridge Between Freud and Adler's Ideas

Since Freud and Adler's time, two broad positions have developed in relation to early childhood memories – the psychoanalytic viewpoint and the Adlerian viewpoint (Statton & Wilborn, 1991). Mayman (1968) combined both Freud's developmental theory and Adler's views in analysing memories. Mayman (1968) said, "Early childhood memories reveal, probably more clearly than any other single psychological datum, the central core of each person's psychodynamics, his (or her) chief motivations, form of neurosis, and emotional problem" (p. 304). Therefore, he believed that early childhood memories have a diagnostic and prognostic function.

In contrast to Adler, Mayman (1968) examined both the manifest and latent content of early childhood memories. He believed that they hold material that is both concealing and revealing. This point of view encapsulates the notion of early childhood memories as reflecting unconscious information in relation to how a person views the world and others, as well as indicating current concerns (Fowler et al., 2000). Mayman (1968) conducted a systematic interpretation of the

psychological material that was revealed in early childhood memories. His contribution has broadened the possibilities of examining early childhood memories for their projective content and also for information about personality and the aetiology of a person's psychological condition. Mayman (1968) developed a measure of prototypical interpersonal themes, object relations and Freud's psychosexual stages to measure these different aspects of early childhood memories. He believed that early childhood memories were dynamic in that they reveal character structure, relationship patterns and psychopathology (Appelbaum, 2000; Fowler et al., 2000).

2.1.4   *Object Relations and Early Childhood Memories*

According to Mayman (1968), personality is organised around object relationship themes. Object relations are usually defined as the internal experience of the relationship between a person and other people (objects) that develops from consistent patterns of intimate interpersonal interactions. These patterns have associated cognitive (thoughts) and affective (feeling) components.

An important aspect of object relations theory, is the consequence of dysfunctional relationships between the primary caregiver (usually the mother) and the child. Bowlby claimed (1969, 1973) that the child's interactions with the mother are internalised into a working model of attachment. The model includes perceptions of the self, others and the self in relation to others (the environment). In cases where the mother is emotionally distant from the child, such as a lacking in terms of bonding or attachment with the child, this often gives rise to feelings of deprivation and abandonment in the child. Consequently, the child's self-perception and the perception of others (object representation) may then be

severely and negatively affected. In extreme examples, the world (and others) may be perceived as malevolent. These actual experiences develop into maladaptive schemas or cognitive 'scripts' that are integrated into the personality and in turn lead to similar experiences or perceptions of the self and others that are often perpetuated throughout life (Westen, 1990).

Research studies (e.g., Waters & Merrick, 2000) have investigated interpersonal patterns such as the relationship between the level of attachment between the mother and child in infancy and later interpersonal relationships that the child develops as an adult. The findings indicate that the patterns of relationship that are formed in the first few years are crucial in setting the foundation for later interpersonal relationships.

Bowlby (1973) believed that a person could have a conscious and an unconscious side. Therefore, a person who feels an attachment to another person may represent other people (the other) in one way consciously and perceive them in another way unconsciously. He postulated that the unconscious representation exerted a stronger influence on the person than the conscious one.

The examination of both the conscious and the unconscious object relations that people held, were important to Mayman (1968). He purported that object relations such as the emotional bonds between one's self (self) and others that were represented unconsciously were depicted in early childhood memories. He also believed that memories hold information as to what has led to the development of certain character patterns. For instance, a person may view family members as being emotionally distant and an early memory may indicate that the person experienced being abandoned and socially isolated by the family.

The advantage of using early memories in research is that they can be analysed using different psychological perspectives such as Freudian or Adlerian. A contemporary theorist who has combined cognitive ideas with Adlerian theory is Arnold Bruhn (1990a).

2.1.5 Bruhn's Cognitive Perceptual Model

The importance of Bruhn's (1990a, 1990b) theory in this thesis is his incorporation of a schematic approach to understanding early childhood memories, as it allows ready linkage with both Epstein's (1987) maladaptive schemas in CEST and an integration of Young's (1999) contention that maladaptive schemas are involved in unconscious processes. Investigating these schemas in early childhood memories can also test theoretical propositions in relation to the link between particular maladaptive schemas (that are processed unconsciously) and current conscious experiences. Bruhn's Cognitive Perceptual Model and method of analysing memories is examined in the following sections.

Bruhn's (1990a) theory of early memories has integrated models of cognitive schematic processing with Adler's ideas in regards to using early memories to gain insight into a person's current issues. Bruhn's cognitive approach has been influenced by research into memory. Bruhn (1985, 1990b) melded Adler's functional ideas with memory theory, and developed a Cognitive Perceptual Theory (CPT) of early childhood memories.

The cognitive aspects of Bruhn's (1990a) theory are drawn from memory research beginning with the seminal work conducted by Bartlett (1932) on the nature of schemas. Bartlett's studies revealed that "remembering appears to be far more decisively an affair of construction rather than one of mere reproduction" (p.

197). Furthermore, Bartlett's review of thousands of specific memories revealed that veridical accounts of what was recalled in memory were rare. Consequently, he recommended that memory should be viewed as a reconstruction of events that conform with, or justify people's current attitudes. He claimed that attitude and affect comprise the central core around which memory develops.

Bruhn (1990a) acknowledged that Bartlett (1932) was one of the first theorists to propose that memory is constructed from personally relevant attitudes, interests and affects that are organised into schemas. These schemas are formed from personally relevant subjective perceptions that simplify past experiences into précis form. Bartlett's ideas in this regard are similar to Epstein's (1994) notion of the experiential system consisting of schemas that, among other things, are based around beliefs, attitudes, and affect and are generally reflected in a self-identity. These cognitive aspects of schema development that stems from memory research are incorporated into Bruhn's (1990a) theory along with the Adlerian premise that adaptive (unconscious) processes are actively involved in the development of an accessible narrative in the form of an autobiographical memory.

Autobiographical memory in particular, is central to personality in Bruhn's model. According to Bruhn (1985), a person without early recollections about the self and others would have no way of knowing who he or she was. This predicament can be likened to someone with profound memory loss, who has little sense of self as they often have few or no memories to place his or her self in a context. In other words, memories form a framework that provides an identity for the self, and this framework comprises schemas that reflect beliefs, attitudes, and affect about the self and others (Conway, Singer & Tagini, 2004).

Similar to Adlerian ideas, Bruhn (1984) is interested in what is recalled in memories rather than Freud's focus on what is repressed. Like Adler (1965), Bruhn posits that an individual's memories are reconstructions about the past that reflect current pressing concerns rather than veridical accounts of the past. Whether the memory is an accurate depiction of past events is irrelevant for Bruhn, as interpretations are made from the memory's construction. Consequently, Bruhn (1990a) recommends that early childhood memories be best interpreted as metaphors of an individual's phenomenological experiences in relation to how and why his or her world is viewed in a particular way. Bruhn proposes that the schema content in relation to these views of the self in early childhood memories are very stable over time for most people (Bruhn, 1984, 1992a).

The question arises as to why it is, from the millions of perceptual inputs in the form of images and sounds that a person might hear from one day to the next, year in and year out, that early childhood memories can be considered so important? Bruhn's CPT (1985) indicates that people store information that is useful to their development. He claims that early childhood memories are vital to examine because a person attends to, and remembers, that which has the greatest perceived usefulness or meaning to him or her. He believes that certain older memories, such as positive or negative (maladaptive) memories from early childhood, are important because time and thousands of other experiences have not been able to eradicate them.

This view also takes the position that there is an inbuilt tendency or motivation within people to strive towards their potential by retaining memories

that reflect current concerns (maladaptive memories), or positive memories that indicate adaptive ways of dealing with life's challenges. This process is believed to be adaptive as people hold this information unconsciously as a reminder of the main issues that are ongoing in their life and that need to be resolved. Or, in the case of positive memories, they are reminders of previous positive ways of coping with particular occurrences. This outlook of regarding people as being motivated towards positive self-development is concomitant with Carl Jung's (1963/1983) and Roger's (Raskin & Rogers, 1995) contention that people have within their thought processes an adaptive capacity that motivates them towards individuation or completeness within their own individuality.

Bruhn (1990a) also postulated that memories are organised in a hierarchical manner, in that the most pressing issues affecting a person in the present are reflected in the early childhood memories that are retrieved. These issues are often linked with particular schemas that a person has developed through his or her life.

According to CPT (Bruhn & Bellow, 1984; Bruhn & Last, 1982) people selectively develop schemas that are constructed from their major beliefs, needs, fears and interests. Consequently, these schemas highlight and coalesce the most meaningful and pertinent information from an individual's numerous experiences. They reflect attitudes about the world, other people and the self. Autobiographical memories are structured around these schemas and determine the way in which the person perceives the environment. Those beliefs that become firmly established develop into axioms (also known as laws) in a person's personality,

with past and present experiences forming a coherent and internally consistent structure for the individual.

2.1.6   Bruhn's Organisation of Early Childhood Memories

Bruhn (1990a) attempted to capture the countless scenarios that arise in early childhood memories by organising them around the following seven factors that are represented in memories– attitude; affect state; content; time and people; place and activity. He did not suggest that these are the only seven factors, but rather that they are the most important ones for investigating personality, attitudes, expectations and unresolved issues. These aspects are examined in the following sections.

2.1.6.1 Attitude and affect.

According to Bruhn (1990), affect and attitude are the most important factors to understand in memories. He believes that they function according to the laws of attraction. For example, once an attitude is accepted as one's own, early childhood memories then often reflect this attitude, such as "People are generally abusive". A person's attitude seems to function as the main criterion for information to enter into an early memory and it usually follows that a person's constellations of autobiographical memories are constructed to reflect an attitude, even if factual instances are to the contrary (Demuth & Bruhn, 1997). This notion of attitude is similar to Young's notion of a person having a dominant maladaptive schema. For example, if a person has a maladaptive schema of abandonment, this may also be conceptualised as an unconscious attitude that filters incoming information so that the person focuses on issues surrounding feeling abandoned. Young (1999) argued that by people viewing their world

through their schemas, they tend to remain fixed in their beliefs and feelings about themselves and their environment and in this way, maladaptive schemas are perpetuated.

Affect is considered the second most important organising principle in early childhood memories as it mostly reflects one's present mood (Bruhn, 1990a). For example, distressed individuals often recall early childhood memories in which they are distressed (Shedler, Mayman & Manis, 1993). The importance Bruhn (1990a) gives to affect is consistent with Epstein's (1998) view that affect is the driving force in the experiential system, which in turn influences behaviour. Epstein believed that schemas that operate unconsciously are initially formed around emotions and that affective schemas are held and activated when similar circumstances arise.

According to Bruhn (1990a), positive or negative affect represented in memories reflects different issues and therefore the content of memories can be divided into these two major categories. Negative Affect (NA) in memories is of particular importance as it indicates unresolved issues, or the frustration of major needs. By contrast, Positive Affect (PA) reflects the satisfaction of major needs that are being met. Positive Affect reminds the individual, and alerts the therapist, of how to orient him or herself to potentially fulfil his or her needs. It may also act to stabilise the individual by providing hope of better times ahead through positive memories of the past. Therefore, a person's current mood and attitude determine what is recalled (Bruhn, 1990a).

2.1.6.2 Content.

The third organising factor in Bruhn's (1990a) model is related to the content category of the memory. Certain probes such as "What is the first memory of your achievement?" help to illuminate certain areas of interest that might be helpful to understand a therapy client's current views towards his or her accomplishments, or alternatively, failures. Bruhn believed that there are many content categories that may elicit useful data depending on the context of the client's difficulties. For instance, memories could be categorized into loss, failure, mastery or injury memories.

2.1.6.3 Time and people.

Time is another category around which autobiographical memory can be organised. Specific events from a particular time (year) can be targeted or the age of the person at the time of the memory (Bruhn, 1990a). For example, the first day of kindergarten was a significant time for most people and may indicate a variety of aspects about a person, such as the way the person copes with new events. Bruhn (1990a) also organised memories along a dimension of time.

Memories can also be organised around people. The way people are described in memories can provide information that is used to assess clients' schemas for how they relate to others (otherwise known as Object Relations), such as their mother or father, or women and men in general (Last & Bruhn, 1992). For example, asking for the first memory of mother or father, or first traumatic memory of mother or father has been found to be an efficient method in a therapy setting of accessing a range of issues in relation to how the client relates to significant others and how they perceive others relating to themselves. It can

also give the therapist vital clues about what to be aware of in the therapy setting in relation to the client's view of therapy and the therapist (Fowler et al., 2000; Mayman, 1968).

2.1.6.4 Place and activity.

The organising factor of place can be utilised to probe for expectations about certain associations linked with locations, such as home or work. Bruhn (1990a) pointed out that probing for early childhood memories associated with a place does not yield spontaneous memories. However, such probes may tap into important areas and common themes that are revealed over a number of different memories. For example, the first memory of school may reveal information about mastery in a new situation (e.g., Bruhn & Davidow, 1983).

Activity is the last factor around which Bruhn (1990a) suggested early childhood memories can be organised. This category can elicit numerous interesting aspects about a person that surround activities such as fighting, sex, or sport. For example, an early memory of sex may reveal information about intimacy and how the client feels about sex in general.

2.1.7   Memories Without Probes

From Adler's (1998) point of view, spontaneous memories such as the first early memory that comes to mind are the most projective memories, as there is no prime or probe used to influence a particular response. Bruhn (1984, 1989; Bruhn & Schiffman, 1982a) agreed that a person's major unresolved issues could be identified from his or her spontaneous early memories. However, he suggested that once these memories are elicited, the therapist could also ask for other

memories with a probe, such as an early memory of mother or father. Such probed memories can give additional information that surrounds a client's central issue or concern than is revealed from asking for a spontaneous memory exclusively (Fowler et al., 1996).

In concordance with Adler (1956, 1941/1998), Bruhn (1990a) proposed that the first early memory often gives the therapist insight into the individual's interpersonal interactions. However, Bruhn also suggested that a number of memories in succession from the same person can be viewed as a progressive whole. They can alert the therapist to some important diagnostic information such as repeated psychological patterns that are discernable in many of the person's memories. For example, the set of memories may begin positively (positive memory) but may deteriorate (negative memory) as new memories are given. A number of memories can help to develop a psychological profile of the person that can better explain his or her behaviour than can individual memories in isolation.

2.1.8   Early Childhood Memories and Personality Schemas

An important and principal aspect of early memories is that they can contain information that reflects personality characteristics (e.g., Adler, 1929/1971, 1941/1998; Bruhn, 1990a) For instance, an individual who has a history of physical or emotional abuse from others may have internalised an attitude of defensiveness or mistrust of others. This internalised attitude has developed into a personality characteristic that reflects the expectations or self-schemas that were formed from negative past experiences. Bruhn argues that if a negative self-schema, such as one of abuse, was an issue that predominantly

affected a person's life, then this information would more than likely be revealed in his or her early childhood memories. Concomitantly, Bruhn (1995) suggested that early childhood memories contain many negative self-schemas that can be reduced to meta-issues. He argued that these meta-issues include - trust, security, separation/individuation, cooperation, self-confidence, mastery, intimacy and understanding, or their opposites (Bruhn, 1992a, 1992b).

The nature and development of these negative self-schemas or meta-issues (Bruhn, 1992a, 1992b) are consistent with Young (1999) and Epstein and Pacini's (1999) views in relation to the development of negative (maladaptive) schemas. Young and Epstein also indicated that maladaptive schemas are formed from early childhood experiences that develop outside of conscious awareness and are dominant in affecting the way people perceive their behaviour and views of self and other.

2.1.9   *Early Childhood Memories as a Projective Measure in Therapy*

Analysing early childhood memories is a method of providing information and insight into a person's current personality structure and unconscious maladaptive schemas without the person necessarily being aware that they are revealing this sort of information. As such, this method also comes under the generic heading of projective testing (Reber, 1985). The utilisation of early childhood memories as a projective technique predates the Rorschach and the Thematic Apperception Test by many years (Bruhn, 1984). However, apart from Mayman's (1968) indications on how to assess and interpret early childhood memories, there are few manuals that exist before Bruhn's (1990a).

Bruhn (1997) advocates that there is an advantage in asking a client in therapy for his or her early childhood memories. This method enables the client and the therapist to be aware of the client's underlying problems more parsimoniously than can be done with traditional psychotherapy techniques. In Bruhn's clinical experience, eliciting clients' early childhood memories creates an atmosphere that is conducive to accessing feelings and reveals repeated negative behaviour patterns that occur in the memories (e.g., Demuth & Bruhn, 1997) and are often repeated in the client's life.

The approach can also uncover suppressed memories that may otherwise take many sessions to uncover (Fowler et al., 2000). The memories can be analysed in therapy sessions that encourage the client to focus on issues and feelings (affect) that might otherwise be omitted in face-to-face therapy (Bruhn, 1995). These memories can revive a reconnection with the feelings that are associated with personal history and therefore promote self-awareness and insight into the unconscious meanings of the memory. As a therapeutic tool, this then invites the client to engage in an interpretation of the meaningful and pertinent information that is revealed (Bruhn, 1989).

An important goal of therapy is to identify the most influential maladaptive attitudes that are currently influencing the client's thinking and behaviour (Bruhn, 1990a; Young, 1994). Consequently, early memories have the potential as a projective technique to illuminate the most important maladaptive influences affecting people, out of many possibilities, in a short period of time (Bruhn, 1990a; Shedler et al., 1993).

2.1.10 Summary of Early Childhood Memory Theories

This chapter has examined theories pertaining to early childhood memories beginning with Freud (1901/1962) and Adler (1929/1971). These theorists advocated that these memories contain information that is useful in relation to understanding peoples' unconscious motivations and tendencies (Freud, 1910/1957) and also more obvious current tendencies and goals (Adler, 1956). Although Freud and Adler agreed on the usefulness of early childhood memories in therapy, how they interpreted the information from memories was influenced by their own particular theories.

One resolution of these differing ways of analysing early memories is to blend both theorists' views. Although Mayman (1968) used Freud's stage theory to analyse memories, he agreed with Adler's ideas in regard to memories revealing current issues and concerns. By combining both views, Mayman claimed that early memories contain both latent (unconscious) and apparent information and his work demonstrated the strong link between assessment of early memories and diagnosis of prototypical dilemmas and personality characteristics (Fowler et al., 2000).

As a contemporary early childhood memory theorist, Bruhn (1990a) drew on Adler (1956), Mayman (1968) and Bartlett's (1932) ideas to develop a Cognitive Perceptual Theory (CPT) that is based on memory theory and research. He proposed that stable sets of idiosyncratic schemas are stored in memory and new information that does not fit existing schemas is usually discarded. His theory is a contextual theory in that it is centred on a person's current development. From

Bruhn's viewpoint, people are striving towards their goals and negative affect

early memories indicate key areas where these goals are hampered.

Adler (1998), Mayman (1968), Bruhn (1985), and others (e.g., Fowler et al.,

1995, 1996, 2000; Josselson, 2000) endorse using early childhood memories as a

window into unconscious information that reveals important aspects about

personality and psychological issues presently affecting an individual. Bruhn's

(1985) CPT model emphasises the importance of using a systematic method to

access crucial psychological information that is stored in a schematic form in

early childhood. The next part of Chapter 2 examines the empirical research that

supports the validity of using early childhood memories to investigate the

influence of unconscious maladaptive schemas on psychological health and

behaviour.

2.2　　　Empirical Research on Early Childhood Memories

Early childhood memories were employed in this thesis as a vehicle to

investigate Young et al. (2003), Beck (1996) and Epstein's (1994) contention that

maladaptive schemas often influence psychological health and wellbeing from an

unconscious level. Consequently, previous research that attests to the validity and

reliability of employing early childhood memories to examine psychological

health and behaviour is now examined.

In the last two decades, an increasing number of studies have investigated

the ability of early childhood memories to reveal information outside of conscious

awareness that is believed to be influential in affecting a person's behaviour (e.g.,

Bruhn, 1981, 1984, 1985, 1990b; Elliot, Amerikaner & Swank, 1987; Fowler et

al., 2000; Mansager et al., 1995). In particular, there is empirical evidence to support the utility of using information from early childhood memories to predict a person's motivational stance (e.g., Bruhn & Schiffman, 1982b) and to differentiate people with different levels and types of psychopathology (e.g., Bruhn & Davidow, 1983; Chaplin & Orlofsky, 1991). Early memories have also been shown to identify people's strengths and weaknesses (e.g., Wheeler, 1987) and personality characteristics (e.g., Bruhn, 1984; Mayman, 1968) and to identify people at risk of ill health (e.g., Last & Bruhn, 1985; Shedler, Mayman & Manis, 1993). Additionally, research is discussed that analyses the stability and coherence of information revealed in early childhood memories (Josselson, 2000), and the object relations themes that indicate where therapy interventions are best focused (e.g., Fowler et al., 2000).

2.2.1 Key Elements in Early Childhood Memories that Predict Motivational Stances

Some of the earliest applications of analyses of early childhood memories by Bruhn and colleagues (e.g., Bruhn & Schiffman, 1982b; Last and Bruhn, 1992), linked motivational aspects represented in people's early memories to their current self-reported motivational stances. Subsequently, locus of control has been analysed in memories and linked with depression in old people (e.g., Allers, White & Hornbuckle, 1990), and substance abuse issues (e.g., Chaplin & Orlofsky, 1991; Chesney, Fakouri & Hafner, 1991).

Several of these studies drew on Rotter's (1990) notion of internal and external locus of control. Rotter (1990) defined internal locus of control as one's perception of the source of control over one's behaviour as being within his or her

own responsibility. In contrast, Rotter indicated that a person who deems that control over his or her life comes from elsewhere, has an external locus of control.

Using themes and beliefs present in the respondent's early childhood memories, Bruhn and Schiffman (1982b) were able to identify a person's locus of control stance as measured by Rotter's (1966) Internal/External Locus of Control scale. They examined themes and beliefs such as attitudes towards achievement, punishment, separation and physical harm. Incidentally, these themes and beliefs are similar to Young's (1990) early maladaptive schemas of Failure, Punishment, Abandonment, and Abuse or Vulnerability to Harm respectively. Those people who had an internal locus of control stance frequently recalled early memories of landmark achievements, such as spelling their first word, beginning to walk, or swimming for the first time. This group was able to recall having depended on themselves even as children. In contrast, people with a more external locus of control, had memories of themselves as being passively detached observers, or as involved in activities that they disliked. They had more early memories containing less mastery over situations and more memories of unpredictable punishment by others, than people with an internal locus of control. People with an external locus of control also had more memories of being victims in situation beyond their control, more themes of being abandoned by care takers and more harm was attributed as stemming from others than people with an internal locus of control. In general, the results from 153 loci of control predictions indicated that 127 control stances were correctly predicted from the content of the early childhood memories.

Other studies that have focused on a locus of control motivation have considered it from a more continuous dimensional perspective (e.g., Last & Bruhn, 1992). For example, at one extreme, a person has an external locus of control stance in which they consider that they have no control or mastery over the environment and they are depicted as passive or a victim, and at the other extreme a person has an internal locus of control with full control or mastery over their environment and destiny. These studies have examined the link between the degree of locus of control in early memories and current psychological indices such as depression.

External locus of control in early memories has been found to be positively related to depression in old people and differentiated depressed from non-depressed groups (e.g., Allers, White & Hornbuckle, 1990). It was also represented in the memories of people with substance disorders. Chaplin and Orlofsky (1991) found that elevated levels of external locus of control in the memories of alcohol dependent people were associated with less social interest and greater passivity. The memories also reflected more negative self-concepts when compared to non-alcohol-dependent people's memories. The alcohol-dependent people's early childhood memories also included more abandonment and misery themes than the non-alcohol-dependent group.

An examination of the locus of control in memories of people receiving treatment for alcohol abuse, has aided in predicting whether they will continue therapy or quit. For example, Chesney, Fakouri and Hafner (1991) investigated the memories of alcohol-dependent people that were willing to continue treatment (continuers) compared with alcohol-dependent people unwilling to continue

(discontinuers). The continuers had memories that contained more negative or unpleasant themes and exhibited more of an internal locus of control than the discontinuers. Interestingly, Chesney et al. reported that the discontinuers had more themes of death in their memories than the continuers. This theme or symbolism of death in the memories may well be important to explore with these people. It may help in the understanding of the underlying concerns or reasons for their behaviour.

Even though the continuers had higher levels of negative affect than the discontinuers, it seems that an internal locus of control was a more important factor in determining whether people would continue in the therapy than negative affect (Chesney et al., 1991). Chesney et al. believed that the continuers considered that it was up to them to improve and that it was in their control to do so. In contrast, the discontinuers felt happier but also believed that their situation was out of their control. Having a number of aspects to examine in memories assists researchers to ascertain the contribution of each aspect and thereby facilitate an explanation of crucial differences between groups.

2.2.2   *Early Childhood Memories and Detecting Levels and Types of Psychopathology*

Another of the earliest applications of the analysis of early childhood memories by Bruhn and colleagues (e.g., Bruhn & Davidow, 1983) was to link themes and content in memories to levels and types of psychopathology. For instance, Bruhn and Davidow (1983) showed that themes in early memories could differentiate delinquent teenagers from a non-delinquent control group. The delinquent group's early childhood memories more often depicted early deprivation and the inability to form meaningful relationships with other people.

There was a greater incidence of a combination of grandiosity and feelings of inferiority than the non-delinquent control group. Delinquent teenagers recalled more memories than the non-delinquent teenagers that involved injuries (usually to the head), or related to being alone and lacking judgement, impulse control and self-sufficiency. They were also more likely to recall trying to accomplish a task and failing, or being victimised. In comparison, the non-delinquent group recalled more mastery over situations and remembered others being victimised.

The key features (schemas) represented in the memories of the children diagnosed as delinquent in Bruhn and Davidow's (1983) study were social isolation, deprivation, and a lack of mastery over the situation. These features concur with Young et al.'s (2003) clinical findings whereby they found people with similar maladaptive schemas were the most psychologically damaged.

In studies of early memories, unpleasant themes and less friendly interactions are common aspects found that identify people with high levels of self-reported psychological dysfunction. For example, in a study by Elliot, Fakouri and Hafner (1993) the early memories of a male prison population included their mother and other family members more often when compared with a non-prison control group. But, the key feature of the prisoners' memories was that they were mostly associated with unpleasant scenarios and contained more themes involving deaths, punishments and misdeeds than was found with the non-prison group.

Identification of core themes through the examination of early childhood memories is possible even with client groups that have quite severe psychopathology. Grunberg (1989) conducted an exploratory study of the early

memories of 30 mentally ill homeless men. He found that the men's memories were mostly negative in nature and contained themes of loneliness, conflict, defiance of authority, or victimisation. These themes mirrored the most relevant concerns and attitudes of the men's present lives. Although many of the men were currently in a psychotic state, they understood the procedure of reporting their early childhood memories and were relaxed with this seemingly non-intrusive process. The information that was revealed in these men's memories opened the possibility of bringing about positive changes that might ordinarily be difficult to realise given the psychotic state of the men. The information indicated the issues that were most pressing for this group of men. However, how memories are analysed will depend on what the researchers are looking for. This is usually determined by their theoretical leanings and the system that they use to analyse memories.

2.2.3   *Analysing the Content of Early Childhood Memories Using a Scoring System*

Bruhn and colleagues (Bruhn & Davidow, 1983; Davidow & Bruhn, 1990; Last & Bruhn, 1983, 1985, 1990) thought it important that a systematic scoring system be developed to improve reliability and validity when analysing early childhood memories. Their system has undergone some important revisions since its inception. Bruhn and Davidow (1983) initially developed a scoring system to analyse the early childhood memories of two groups of teenagers. One group comprised teenaged boys convicted of 'breaking and entering' crimes and the other group comprised boys of the same age group who did not have any convictions. The scoring system was compared to clinicians' interpretations of the transcribed memories and no coding system. Bruhn and Davidow found that the

coding system improved reliability. Without a coding system there was only 48% agreement between clinicians on whether a child was considered delinquent on the basis of their early memories. In contrast, after discussion among the clinicians who used Bruhn and Davidow's coding system, 100 % of non-delinquents and 80% of delinquents were correctly classified.

To further improve the reliability of diagnosing psychopathology, Last and Bruhn (1983) continued to develop Bruhn and Davidow's (1983) scoring system and named it the Comprehensive Early Memories Scoring System (CEMSS). The CEMSS comprises nine categories that include characters in the memory (e.g., mother), the setting (e.g., home), sensory-motor aspect (e.g., visual sense), relation to reality (e.g., degree of credibility of story), object relations (e.g., perception of self and others), thematic content (e.g., mastery or failure), affect (negative or positive), damage aspect (e.g., to self) and age at the time of the memory. Last and Bruhn analysed the early childhood memories of 94 boys aged from 8 to 11 years of age. On the basis of a recognised measure of child behaviour, the Child Behaviour Checklist (Achenbach, 1978a, 1978b), the boys were placed into three groups - well adjusted, mildly maladjusted and severely maladjusted. When compared with the average of three clinicians' professional assessment (37% accuracy), the CEMSS was more accurate at correctly allocating boys to their respective group (49% accuracy) using a Discriminant Function Analysis.

Last and Bruhn (1983) also sought to determine whether aspects of early childhood memories could discriminate between children who were categorised as currently exhibiting different levels of psychopathology. As with the previous

analysis, children were allocated to three groups and Discriminant Function Analyses were employed to extract the CEMSS variables represented in the memories that best differentiated the three groups. Significant predictors such as 'object relations' or 'affect' emerged for each memory and were able to differentiate the groups. However, the predictors varied depending on the memory. A combination of significant predictors from the second early memory best predicted membership of the well-adjusted group with 65% accuracy and the mildly adjusted group with 68% accuracy. However, only 26% of the severely maladjusted children were correctly identified, which is at a rate that is no better than chance (33%). Although this result was promising for the well-adjusted and mildly-maladjusted groups, often it is that which predicts severe levels of maladjustment that is of most interest to researchers and clinicians. It is possible that the correct prediction of the severely maladjusted group would have been improved with a greater sample size or by expanding the predictors to include aspects that are more relevant to this group.

Overall, Last and Bruhn's (1983) results indicated that coding of what they termed structural variables including 'relation to reality' (logically connected and credible), object relations (e.g., perceptions of the environment as safe), and perceptions of self (as either active or passive) were the best means of differentiating the three groups (levels of psychopathology). These variables were significantly better than the content variables such as characters in the memory (e.g., mother), setting (such as school) and the thematic content (such as deprival of care). The researchers indicated that combining the information from more than

one memory in an analysis might result in a more accurate prediction of group membership.

On the basis of this finding, Last and Bruhn (1985) sought to identify the predictors (structural or content) represented in early memories that could best distinguish between types of psychopathology rather than levels of psychopathology. Four different groups of boys participated that were diagnosed with delinquent, hyperactive, somatic, and schizoid type behaviours. In contrast to their earlier study, in this research the results from the Discriminant Function Analyses indicated that the content variables in the memories (e.g., the presence of mother or father) rather than structural variables (e.g., the environment being unsupportive) were the best predictors of membership in the different psychopathology groups.

Taken together, the results of Last and Bruhn's (1983, 1985) studies indicate that both structural and content elements are needed in psychological profiles of psychopathology. For example, the boys classified as 'delinquent types' contained a profile in their memories that included references to father figures (content) and portrayed the child as having little effect on the father figure in an environment that was unsupportive (structural). This profile from the memory is congruent with the clinical notion that delinquent children often have (emotionally) absent fathers and view themselves as unable to influence their environment and the people around them.

The development of early memory scoring systems tailored to assess groups that are considered particularly difficult to diagnose, have met with considerable success when compared with self-report measures. For example, in

the past, a large number of false positive and false negative results have been evident in research attempting to predict dangerousness on the basis of self-report inventories or standard clinical assessments by a therapist (Tobey & Bruhn, 1992). However, Tobey and Bruhn showed that the analysis of prisoners' early childhood memories using a scoring system they had designed for dangerous people in particular, as well as using the Comprehensive Early Memory Score System-Revised (CEMSS-R; Last & Bruhn, 1990), was highly predictive of dangerousness. The majority of dangerous patients within a psychiatric prison hospital were found to recall more aggressive early childhood memories (73%) compared with the non-dangerous group (43%). The false positive rate for the dangerous group was impressive; only one person out of the 16 that were classified from aggressiveness in their memories was wrongly classified as dangerous.

Depending on the research question, Davidow and Bruhn (1990) advise that specific group attributes need to be matched with scoring system categories. Therefore, they recommended that researchers develop their own content codes and rating scale in conjunction with the CEMSS-R for greater identification of group membership. In their case, the development of additional aspects to the CEMSS-R (Last & Bruhn, 1990) that targeted a particular group, enabled Davidow and Bruhn (1990) to improve on their results from a previous study (Davidow & Bruhn, 1983) on delinquency. Davidow and Bruhn (1990) reported that no differences between delinquent and non-delinquent groups would have been found in their 1990 study had they used the CEMSS, without adding particular themes that were related to their target group of delinquent children. In

particular, it was found that expanding the existing scale to include variables such as 'themes of rule breaking', and 'quality of the situation when alone', yielded significant group differences that otherwise would not have been found.

Additionally, Davidow and Bruhn (1990) advised that increasing the number of early childhood memories that a person gave from two (e.g., Davidow & Bruhn, 1983) to four increased their chances of finding relevant themes in the memories and of developing an individual profile across the memories. Therefore, the findings from these studies (e.g., Davidow & Bruhn, 1990; Last & Bruhn 1983, 1985) underscore the importance of gathering more than one early memory from participants in a study or in therapy. This enables the flexibility of using predictors from each memory in an analysis or, combining predictors (composite measure) from a number of memories in an analysis. It was also apparent that affect is present (positive or negative) in most memories and needs to be accounted for in a scoring system.

2.2.4 *Negative Affect in Early Childhood Memories and the Link with Psychological Symptoms*

Many have argued that negative affect is a vital indicator of salient issues that are important to an individual (e.g., Beck & Freeman, 1990; Young et al., 2003). Thus, negative affect is believed to be a pervasive force (in the experiential system) and has been linked with adverse physical as well as psychological wellbeing (e.g., Epstein, 1987; Epstein & Katz, 1992; Katz & Epstein, 1991; Pacini & Epstein, 1999; Pacini et al., 1998). The value of early childhood memories is that they can reveal negative affect that is often outside of conscious

awareness. This provides a particular link to self-reported psychological health, and serves as an indictor of progress in therapy.

A growing number of studies have demonstrated relationships between representations of negative affect represented in early memories and psychological symptoms (e.g., Saunders & Norcross, 1988), and perceptions of others (Fakouri & Zucker, 1987). Saunders and Norcross (1988) found positive relationships between the emotional tone (pleasant versus unpleasant) of university students' early childhood memories and symptoms of distress. Saunders and Norcross used the CEMMS (Last & Bruhn, 1983) to categorise early childhood memories and their results reveal that the presence of negative affect and references to injuries to the self were positively related to students' self-reported levels of hostility, paranoia and somatisation. Saunders and Norcross also found that a perception of the self as being passive in the memory and acted on by the environment was positively related to somatisation, obsessive-compulsive, hostility, paranoid ideation, and psychoticism. These relationships were significant but were relatively small in magnitude (the highest was .25). Saunders and Norcross emphasised that the large number and variety of variables probably explained the weak relationships (correlations) in their results.

According to Fowler et al. (1995), the affect tone of early childhood memories (pleasant vs. unpleasant) is related to a person's current experience of the world. The memories of people in the clinical group in their study revealed significantly more negative affect and victimization when compared to the non-clinical group. In addition, there were differences between depictions of the self

and of others, with the clinical group describing themselves and others in a flatter (lack of affect), and more negative way, than the non-clinical group.

The emotional tone of early childhood memories has also been linked to self-reported perceptions of other people. For example, in a study by Fakouri and Zucker (1987), students who self-reported more negative views towards others had more negative affect levels in their early childhood memories when compared with students with more positive views towards others. From these studies it would seem that representations of affect in early memories is an indicator that reflects concurrent conscious psychological difficulties. The following section examines the few studies that have investigated the function of affect in early memories.

2.2.5   *Negative Affect and its Link with the Stability and Coherence of Early Childhood Memories*

Researchers that have examined the affective component of early childhood memories have found it to be an important indicator of change in a person's psychological status (Savill & Eckstein, 1987) and as an indicator of the importance of an issue to a person (Josselson, 2000). Josselson argues that the intensity of feelings associated with a memory has a symbiotic relationship with themes in the memories. She claimed that schematic themes reflect stable personality characteristics or, as Bruhn (1985) coined 'unfinished psychological issues'. She also argued that affect generally changes over time in alignment with changes in perception towards an important issue. A small number of studies (e.g., Josselson, 2000; Savill & Eckstein, 1987) investigated affect and schematic themes using a longitudinal method to test whether themes in memories change

over time (are dynamic) and therefore reflect current mental status rather than stable characteristics.

One such study by Savill and Eckstein (1987) compared the emotional components and themes contained in early childhood memories of people admitted to a psychiatric hospital with a control group of university students of the same age. Over the course of treatment, Savill and Eckstein found that in general the psychiatric group's memories changed in affect (became more positive), even though the content of many of the memories did not change during this time. In comparison, the university students' (control group) level of affect in their memories did not significantly change over the same time period. Savill and Eckstein concluded that the affect content of early childhood memories was a valid index of assessing current mental status and a person's progress over time, whereas themes tended to reflect stable personality characteristics. Some themes did change as psychiatric patients improved, such as themes that depicted less dependency and more social interest. However, this change may also have reflected a shift in personality characteristics brought about by therapy.

With progress in therapy, the early childhood memories of children have also noticeably changed with more positive affect and less negative affect represented in their recollections. Although the participants only numbered three male and six female children, a study by Statton and Wilborn (1991) found that the children's memories contained more themes of mastery at the end of therapy when compared with memories from the beginning of their therapy. However, given the small sample size of this study their results need to be viewed with caution.

One of the longest longitudinal studies to test for stability, coherence and change in themes and affect of early childhood memories, was conducted by Josselson (2000). Memories were taken from 24 people at three stages of their lives (age 21 years, 33 years and then at 43 years of age) over a 22-year period. Confirming and expanding on Savill and Eckstein (1987) findings, Josselson noticed that when people's spontaneous early memories were taken over a considerable timeframe, they consistently reflected aspects of personality such as themes that relate to unfinished psychological business, and these themes remained relatively stable. However, other aspects, such as anger (affect) associated with the same event, subtly changed in parallel with developmental stages. For example, in Josselson's case studies, one woman's memories at the three collection times had a similar central issue of being noticed and attended to at her aunt's wedding. The first memory recalled at 21 years of age, depicted her fear of being shamed by doing something wrong and also her joy at being noticed by an important guest at the wedding. In a second memory at the same age, she is angry at being ignored and left alone by others and her anger is more out of control. At 33 years of age, she was more comfortable at expressing her anger at being ignored as the same scene was recalled. At 44 years of age, she was bored rather than angry at being ignored and did not seem to direct her anger at any particular person – it was a more global anger than previously described in the memories. Therefore, this woman exhibited a stable central recurrent theme of not being noticed, or not being attended to, but there were differences in her affective reactions to this theme at different developmental stages of her life.

Similar notions of stability were hypothesised by Adler (1956) and Bruhn (1984) and are congruent with Epstein's (1980) CEST, whereby a person is motivated to maintain the stability and coherence of his or her self-theory as it is intrinsically connected to his or her identity. Therefore, once a change in the perception of one's self occurs, the system incorporates this new information by reconstructing the memory to incorporate the change brought about by life experience. Also, findings in relation to the instrumental role of affect in studies of early childhood memories (e.g., Allers et al., 1990; Fakouri & Zucker, 1987; Savill & Eckstein, 1987) support Beck (1996), Young (1999) and Pacini and Epstein's (1999) assertions that affect has an important role in identifying the intensity of maladaptive schemas outside of conscious awareness.

The stability of the central themes and the importance of affect found in Josselson's (2000) study has implications for this thesis when assessing levels of psychopathology from early childhood memories. Maladaptive schemas that are revealed in early memories that are related to different psychopathologies can be viewed as being fairly entrenched and, therefore, stable in people. On the other hand, affect can be viewed as an indicator of the current importance of the memory.

2.2.6 *Object Relations in Early Childhood Memories and the Link with Psychopathology and Current Relationships*

As well as themes or schemas, a number of theorists have emphasised the stability of internal patterns of object relations (relationship dynamics) within a person (e.g., Bowlby, 1969, 1973; Waters & Merrick, 2000), which are also reflected in their early childhood memories (e.g., Mayman, 1968; Fowler et al.,

1999, 2000). The way the self and others are depicted in early memories often reveals a snapshot of how the person perceives themselves and others in their current life (Nigg et al., 1991). As in real life, dysfunctional relationships represented in early memories such as being deprived, isolated or abused by caretakers, generally indicate psychological difficulties in a person's current existence (Bruhn, 1985). Some early memory studies have found links between object relations and themes such as deprivation from primary caregivers in early memories and self-reported psychological symptoms. These links are outlined in this section.

The relationships among negative early childhood experiences, early childhood memories and present dysfunctional relationship dynamics were examined in a study by Nigg et al. (1991) using a clinical sample. They found that people diagnosed with Borderline Personalty Disorder (BPD) with a history of substantiated sexual abuse (and not physical abuse) provided early childhood memories that depicted extreme malevolence and deliberate injury (non-sexual) from others. These particular aspects in the memories were able to differentiate people with BPD that had reported sexual abuse from those people diagnosed with BPD who had not reported sexual abuse. A further study by Nigg, Lohr, Westen, Gold and Silk (1992) confirmed that the early memories of people suffering from BPD contained references to greater levels of malevolence from others, deliberate injuries, and less helpful caretakers when compared to the memories of a non-clinical and a depressed group of people. Nigg et al.'s studies indicate that particular schemas represented in memories such as abuse or deprivation, can

differentiate groups and thus indicate subtle differences in the internal makeup of an individual that is related to their psychopathology.

A greater number of themes of mistreatment, threat, rejection, and inferiority were also a dominant feature in the childhood memories of a depressed group of people admitted to a psychiatric hospital when compared with non-depressed university students of the same age (Savill & Eckstein, 1987). The diagnostic value of early childhood memories to predict psychopathology such as depression and the dynamics of current relationships, has also been established with non-clinical groups. For example, Acklin, Sauer, Alexander and Dugoni (1989) examined 212 university students' early memories using a modified form of CEMSS (Last & Bruhn, 1985) to predict depression. The researchers found that when compared with non-depressed people, those categorised as having a depressed mood had associated memories containing schemas with a higher incidence of deprivation and distressing relationships with others. Acklin et al. results supported the psychodynamic premise (e.g., Blatt, Wein, Chevron, Quinlan, 1979; Fowler et al., 1995) that depression stems from deprivation and distressing relations with others (object relations) that are not always consciously acknowledged.

It has been clearly demonstrated that early childhood memories can be an effective method for diagnosing psychological symptoms in cases where people do not acknowledge distress. Shedler et al. (1993) found that some people who defined themselves as healthy on standard mental health scales, were actually maintaining an illusion of mental health by self-reporting the absence of distress when they had clear contrary indications of higher than normal physiological

stress levels. Those who were identified as being stressed physiologically had lower scores of an object relations measure that included whether parents were represented in early memories as sources of comfort or security (high scores meant more secure). These people also showed when compared with non-physiologically distressed people, elevated levels of the environment as threatening, dangerous, malevolent, and frustrating. Additionally, there were more depictions of injury, disaster, traumatic punishment, or being at the mercy of external forces and higher level of negative affect in the memories of the physiologically distressed people who consciously believed that they were not distressed. On the basis of these aspects represented in the memories, Shedler et al. were able to classify each person as distressed or non-distressed with far greater accuracy than self-report measures alone.

Object relations portrayed in early childhood memories are also useful in predicting the dynamics of current relationships. For instance, Fowler et al. (1995) found that analysing object relations in early childhood memories, helped to reveal information about a person's current relationship with others as well as identifying expressions of psychological distress. The early memories of the people in their study contained images and themes of self and others that reflected neuroses and emotional problems of which they were not consciously aware. The specific memories obtained from object relational probes, closely related to the participant's perceptions of dependency (or independence) and nurturance (or deprivation) in their current relationships.

Similar to Bruhn (1990b), Fowler et al. (1995) recognised that early memories reveal prototypical responses that clients face in their interpersonal

lives and in therapy. Prototypical responses outlined in Fowler et al.'s study concur with Young's (1990) maladaptive schemas. For example, feelings of a lack or nurturance and dependence on other people can be related to Young's 'Disconnection and Rejection' domain where there is an expectation that one's needs for nurturance will not be met. Representations of dependency can be related to Young's 'Impaired Autonomy and Performance' domain where there are expectations about one's self and the environment that interfere with one's perceived ability to function independently, or perform successfully.

To reveal object relations schemas that a person may hold, Fowler et al. (1995) endorsed, as Mayman (1968) did, the value of asking specific object relations probes to elicit certain early childhood memories. For example, asking for the earliest memories of mother can reveal information about feelings towards mother (or a female partner) such as experiencing nurturance or abandonment. This request for a specific early memory of mother may also reveal information about women in general. The link between familial relationships in early childhood and later dysfunctional relationships and behaviours is in accordance with Young et al's. (2003) notion of the development of maladaptive schemas. Young et al. postulated that maladaptive schemas develop from dysfunctional early childhood experiences and that these schemas influence psychological health. Similarly, Nigg et al. (1991, 1992) claimed that early childhood memories reflect both cognitive and affective aspects of present interpersonal relationships and also of past experiences. This view is similar to Mayman (1968) in that important psychological information is processed according to schemas that are already formed, and these schemas may also be outside of conscious awareness.

In general, early childhood memory studies highlight the different profiles or combinations of components in the early memories that are associated with different psychological symptoms and relationship dynamics. These profiles seem important to examine in terms of understanding the underlying influences and maladaptive schemas that are present in distressed individuals. They are also of potential value in facilitating the development of clinical interventions (Fowler et al., 2000).

2.2.7   Gathering Information from Self-Report Measures and Early Childhood Memories

One of the questions that arises in examining people's psychological symptoms is how influential are aspects that remain outside of conscious awareness? For example, asking a person to complete a self-report measure of maladaptive schemas may involve drawing more on conscious (rational) than unconscious processes [experiential] (Pacini & Epstein, 1999). This point becomes particularly important when identifying psychological difficulties and selecting psychological measures to make an assessment. In particular, some researchers (e.g., Segal & Muran, 1993; Shedler et al., 1993, 1994) are concerned about the exclusive usage of self-report measures as a diagnostic tool, as they claim that valuable information may not be forthcoming using this method.

For instance, the inability of self-report questionnaires to always diagnose a person's underlying or repressed distress led Shedler et al. (1993, 1994) to a critique of self-report research methods. They argued that it is vital to access concealed (unconscious) aspects of personality and motivation, as well as conscious reports. As they found in their 1993 study, unconscious components

affect health and are not always revealed through traditional self-report paper and pencil tests.

With the development and proliferation of 'objective self-report' measures by practitioners in psychology, Shedler et al. (1993, 1994) argue that these measures are often relied on exclusively as a data collection method. They contend that many psychological researchers dismiss qualitative methods of gathering information from people, as there is a belief that this method lacks objectivity when diagnosing a client's problem. However, Shedler et al. claim that researchers need to look beyond the face vale of self-report inventories to thoughts and feelings the client cannot always acknowledge consciously. Otherwise, warn Shedler et al., people might not receive help when they needed it most.

2.2.8   *Using Early Childhood Memories to Elicit Difficult Information*

A large range of studies (e.g., Allers, White & Hornbuckle, 1992; Demuth & Bruhn, 1997; Mansager et al., 1995) attest to the value of early childhood memories in gaining important information from a range of people who might ordinarily not be able to express their main concerns or issues for a variety of reasons. These people range from prisoners and adolescents who often find it difficult to divulge personal information, to the hospital patients in Shedler et al.'s (1993) study who denied they were unwell despite the contrary evidence from physiological measures. Simply stated, the following studies focus on the advantage of early childhood memories as a method of eliciting the most pertinent information from clients in therapy.

On the basis of clinical experience and empirical data (e.g., Glaser, et al., 2002; Lee & Dunn, 1999; Young, 1999; Young et al., 2003), many therapy clients with self-defeating patterns of thinking and behaviour, are extremely resistant to change. These people often report that they understand rationally what is going on but that their emotions, feelings, beliefs and behaviours remain unchanged. Often, they also find it difficult to express these conflicting aspects. These discrepancies are congruent with Epstein's (1999) CEST model that proposes that there are two processing systems – rational and experiential – that are often in conflict with each other.

Young et al. (2003) claim that many cognitive therapists also have the erroneous belief that clients have access to their feelings with brief training. In reality, according to Young and colleagues, many clients block, or are out of touch with some of their feelings for a variety of reasons, such as an inability to consciously express an identifiable problem.

Bruhn (1990b) recommends that asking for early childhood memories is a particularly effective method for uncovering information that is not always easily obtained. For instance, Demuth and Bruhn (1997) found that sharing early memories in a prison group of substance abusers assisted prisoners to express feelings and experiences that are usually found to be very difficult to elicit under other therapeutic circumstances. Prison populations are usually very resistant to revealing painful experiences, such as feelings of vulnerability. From their experience of doing research in prisons, Demuth and Bruhn have observed that prisoners maintain a tough exterior image and generally do not reveal any apparent weaknesses. Also, inmates usually only express what they believe

therapists want to hear. Interestingly, writing down early childhood memories and expressing them in group or individual settings, is often not experienced in the same way as revealing current feelings or weaknesses.

Prison inmates in the Demuth and Bruhn (1997) study were able to relate early childhood memories of experiences of helplessness, deprivation, rejection and abandonment. This stimulated other members of the group to reveal similar instances from their past. The ability to express uncomfortable psychological material helped to make this group of people feel less isolated and less alone. The group sessions were rated as the most important activity that was offered during an 18-month period of rehabilitation programs. In situations such as these, where clients are resistant to change, the use of early childhood memories was shown to be successful in bringing about positive change. Similar inhibitions could be said to apply to most people. Simply asking people to relate their early childhood memories is usually not experienced as intrusive, or as necessarily revealing overly personal information. Yet, what is expressed in early memories is often the most pertinent psychological material that is related to a person's current difficulties (Bruhn, 1990a; Mayman, 1968).

Adolescents are another group of people that can be especially resistant to expressing their concerns and feelings (Allers, White & Hornbuckle, 1992). However, Mansager et al. (1995) found that using early childhood memories was effective with adolescents for similar reasons to those given by Demuth and Bruhn (1997). Sharing early childhood memories in a group setting of adolescents enabled participants to gain insight into their behaviour and also provided the therapist with information that was helpful in terms of the most important issues

to focus on in the therapy session. Fundamental beliefs and presuppositions that influence young people's perceptions, that might otherwise remain resistant or unconscious, are often revealed in their early memories (Ford & Linney, 1995; Kopp & Kivel, 1990).

2.2.9 *The Efficacy of Early Childhood Memories in Time-Limited Therapy*

Insights from early childhood memories can give the therapist and client a unique understanding of a person's vulnerabilities relatively quickly (Davidow & Bruhn, 1990; Dutton & Newton, 1988; Hyer, Woods & Boudewyns, 1989). For instance, it is possible that through analysis of early memories at the beginning of therapy, the therapist can be alerted to potentially difficult interactions with the client. This might include the client's feelings of dependency or latent feelings of rejection (Fowler et al., 1995). Such insights into the client's pressing concerns early in therapy, make it possible for the therapist to focus on the most relevant material and thus most efficiently use the time that is available.

Research into therapy interventions using early childhood memories even in time-limited situations has been encouraging (Binder & Smokler, 1980; Last, 1997). An increasing problem for the therapist (especially when time is limited) is to ascertain the client's main issue/s. Binder and Smokler (1980) advocated collecting a small number of early childhood memories during the initial therapy session. This enables therapists to understand the most important feelings, present needs and stresses of clients. Binder and Smokler argue that the advantage of analysing early childhood memories, rather than dreams, is that early childhood memories are relatively unaffected by daily happenings or difficulties and are predominantly shaped by the motivational core of the individual.

2.2.10 Summary of Chapters 1 and 2

In these introductory chapters it has been argued that in accordance with Beck (1996), Young (1999) and Epstein's (1987) ideas, maladaptive schemas are a key aspect of a person that needs to be examined in order to understand his or her psychological difficulties and disorders. Young's (1990) contribution is important as he identified a number of maladaptive schemas based on his clinical experience that later empirical research (e.g., Glaser et al., 1990; Lee et al., 1999; Schmidt et al., 1995) has found to be related to psychological health and psychopathology in clinical and non-clinic groups. Young et al. (2003) focused more than Beck (1996), or Pacini and Epstein (1999), on the nature of certain maladaptive schemas that they deem are mostly responsible for dysfunctional psychological health. However, it is contended by the researcher in the present study that the empirical research on Young's (1990) maladaptive schemas has predominantly used self-report measures that have a propensity to measure conscious rather than the unconscious influence of maladaptive schemas.

In support of this argument, Epstein's (1994) CEST provided a broader theoretical framework than Young et al. (2003) or Beck (1996) in relation to the operation of schemas in conscious and unconscious processes. CEST helps to explain that people may believe things rationally and self-report these beliefs, but might concurrently be more affected by schemas operating unconsciously in their experiential system, that may be at odds with their rational processes. However, Epstein and colleagues (e.g., Denes-Raj & Epstein 1994; Epstein, Lipson, Holstein, & Huh, 1992; Epstein & Meier, 1989) tended to describe the operation of at least two processing systems and the dominance of the experiential

(unconscious or implicit) system over the rational (explicit) system, rather than investigating the important schematic information purported to operate within it.

A similar criticism can be levelled at experimental studies (e.g., Bowers & Schacter, 1993; Mitchell, 1993; Nissley & Schmitter-Edgecombe, 2002; Reber, Knowlton & Squire, 1996; Taylor, 2001). They have provided good evidence for the influence of unconscious process on memory, perception and behaviour but have not investigated the influence of unconscious maladaptive schemas on conscious psychological health.

To access unconscious maladaptive schemas, early childhood memories research (e.g., Last & Bruhn, 1983, 1985) has confirmed the utility of examining unconscious representations in early memories. Early memory researchers (e.g., Fowler et al., 1995; Last & Bruhn, 1983, 1985; Mayman, 1968) have found that with the development of coding schemes that include measures of schematic themes, affect and object relations that are examined in a number of memories, these aspects are linked to psychological health and behaviour.

A new aspect that has not been incorporated in previous empirical studies, but is in this thesis, is the inclusion of Young's (1999) maladaptive schemas into the early memories rating system. Although Young's (1990) comprehensive schema domains have demonstrated important conscious links with psychopathology, it is believed that investigating their unconscious influence extends upon previous research. Their examination also tests theoretical propositions of Beck (1996), Pacini and Epstein (1999) and Young et al. (2003) that postulate that maladaptive schemas have a pervasive unconscious influence on people's psychological health and behaviour.

2.2.11 Plan of the Empirical Work

Two linked studies aimed to investigate theoretical propositions proposed by Beck (1996), Young (1999), and Pacini and Epstein (1999). These researchers have all indicated that information processed outside of conscious awareness in the form of maladaptive schemas is related to current self-reported psychological problems. Figure 2.1 on the following page, illustrates the components that are incorporated into the model for both studies. As seen in Figure 2.1, aspects of the Experiential System that are investigated are represented within the circle on the left of the figure. These include representations of Maladaptive Schemas, and Object Relations in Study 1 and the addition of self-rated Affect that was felt by the participants to be present in their memories. The lines from the Experiential System to the Rational System represent the predictive ability of the schemas represented in the memories. The Rational System is represented by the two squares in the middle of the figure. These include self-reported maladaptive schemas and psychological symptoms. The boxes to the far right represent each study and include the dependent measures and groups that are incorporated in each study.

Experiential System (Outside of Conscious Awareness)   Rational System (Conscious Awareness)

Representations of unconscious Maladaptive Schemas (Young, 1990)

Unconscious Representations in Early Childhood Memories as Predictors of

Representations of unconscious Object relations (Last & Bruhn, 1992)

Affect self-rated from memories (in Study 2)

Self-reported Maladaptive Schemas

Study 1
Young's Schema Questionnaire (Young, 1990)

People allocated into Low level groups Medium level group High level group

Self-reported Psychological Symptoms

Study 2
Brief Symptom Inventory (Derogatis, 1993)

People allocated into Low level groups Medium level group High level group

Figure 2.1   Model of Study 1 and 2

In Study 1, unconscious maladaptive schemas are investigated by examining their representations in early childhood memories. The purpose is to examine their relationship (and predictive ability) to self-reported maladaptive schemas. In Study 2, representations of unconscious schemas are examined in relation to a range of self-reported (conscious) Psychological Symptoms. Again, the purpose is to examine relationship (and predictive ability) to self-reported Psychological Symptoms. Four major research questions directed the investigations.

Study 1   Maladaptive Schemas

(1) 'Are unconscious maladaptive schemas and object relations that are represented in early childhood memories able to distinguish between people who currently reported experiencing high levels of maladaptive schemas from people who reported experiencing lower levels?'

(2) 'Which unconscious maladaptive schemas and object relations represented in early childhood memories best identified people that reported currently experiencing high levels of maladaptive schemas?'

Study 2   Psychological Symptoms

(1) Are unconscious maladaptive schemas, object relations and affect that are represented in early childhood memories able to distinguish between people who reported currently experiencing high levels of psychological symptoms from people who reported experiencing lower levels?

(2) Which unconscious maladaptive schemas, object relations and affect

represented in early childhood memories best identified people who

reported currently experiencing high levels of psychological

symptoms?

The two studies were designed to address these research questions. Study 1 investigated Questions 1 and 2 by asking participants for four early childhood memories. Each memory was analysed for (unconscious) representations of Young's maladaptive schemas and Last and Bruhn's object relations. Each participant also completed the YSQ-S (Young, 1998) to ascertain whether people with high levels of self-reported maladaptive schemas could be differentiated from people with lower levels of self-reported maladaptive schemas by the content of their early childhood memories.

Study 2 investigated Questions 3 and 4 by asking people for four early childhood memories. Each memory was analysed for (unconscious) representations of Young's maladaptive schemas, Last and Bruhn's object relations and the respondent's rating of affect in their memory. Participants also completed the Brief Symptom Inventory (Derogatis, 1993) to identify people with high levels of self-reported distress and psychological symptoms. Study 2 extended on Study 1 by investigating whether representations in early childhood memories differentiate people with high levels of self-reported distress and psychological symptoms from people with lower levels. Chapter 3 presents information about the research aims, sample, measures, coding system, procedure and results for Study 1.

CHAPTER 3   STUDY 1

MALADAPTIVE SCHEMAS REPRESENTED IN EARLY

CHILDHOOD MEMORIES AND THEIR RELATIONSHIP TO

CURRENT SELF-REPORTED MALADAPTIVE SCHEMAS

This chapter describes the participants, method and results for Study 1. The purpose of Study 1 was to investigate the relationships between maladaptive schemas represented in early childhood memories and current self-reported maladaptive schemas.

3.1.1   Participants

The Study 1 sample comprised 249 undergraduate psychology students from two campuses of Swinburne University of Technology who were predominately first year students. There were 198 women with ages ranging from 17 to 69 years (M = 22·71 years; SD = 7·71 years) and 50 men with ages ranging from 18 to 46 years (M = 22·90 years; SD = 8·42 years). One man did not state his age. The students participated as part of their course requirements.

3.1.2   Description of the Measures

Respondents in Study 1 completed a package of self-report questionnaires. These included an information page and Young's Schema Questionnaire- Short Form (YSQ-S; Young, 1998). They also completed four Early Childhood Memories. For the full version of these inventories see Appendix (A.1, A.2. &

A.3). The following section provides a description of the measures included in the questionnaire package.

3.1.3   Young's Schema Questionnaire-Short Version (YSQ-S, 1994)

The YSQ-S (Young, 1998) is a self-report inventory designed to measure 15 primary Early Maladaptive Schemas. The scales comprise five domains and 15 subscales each containing 5 items. In total there are 75 items and each item is measured on a six-point scale that ranges from 1 = 'Completely untrue of me' to 6 = 'Describes me perfectly'. Higher scores on the YSQ-S subscales (e.g., 5 or 6) indicate that a maladaptive core belief is present. Scores are summed for each subscale for a total subscale score and these scores are summed for a total YSQ-S score. Possible scores for each subscale range from five to 30 with the total score of the YSQ-S ranging from 75 to 450. There are three additional maladaptive schemas that are included in this section as they were used in the coding scheme that is outlined later but are not in the Shortened version of the YSQ, the YSQ-S. These three schemas are: Approval Seeking, Negativity/Vulnerability to Error, and Punitiveness. The domains and sub-scales of the YSQ-S are defined as follows:

3.1.3.1 Disconnection/Rejection Domain

The Disconnection/Rejection domain includes five subscales. The items comprising this domain tap an expectation that one's needs for safety, security, nurturance, sharing of feelings, acceptance, empathy, stability, and respect will not be met in a predictable manner. The five subscales are:

Emotional Deprivation. This subscale relates to expectations that needs for nurturance, empathy and protection will not be adequately met.

Abandonment. The Abandonment subscale relates to the perceived instability or unreliability of significant others to be available for protection, support and connection, as they are emotionally unstable and/or unpredictable.

Abuse/Mistrust. This subscale has items tapping the expectation that others are abusive, humiliating and manipulative.

Defectiveness. Items in this subscale endeavour to encapsulate the belief that one is intrinsically defective and unlovable.

Social Isolation/Alienation. This subscale encapsulates the feeling that one is isolated or different from other people.

3.1.3.2 Impaired Autonomy and Performance Domain

The domain of Impaired Autonomy and Performance contains four subscales that relate to one's ability to be independent and separate from others – to be competent. The four subscales are:

Dependence/Incompetence. Items in this subscale relate to the belief that one is not capable of competently managing everyday responsibilities.

Vulnerability to Harm/Illness. This subscale relates to the exaggerated fear that disaster will strike at any time (e.g., medical, natural, financial).

Enmeshment. Items in this subscale tap excessive emotional involvement with others due to the belief that at least one of the other individuals cannot survive or be happy without continual support from the other.

Failure to Achieve. This subscale relates to the belief that one is fundamentally inadequate when compared with others. Consequently this leads to a belief that one is destined to fail in areas of achievement (e.g., school or work).

3.1.3.3 Impaired Limits Domain

The Impaired Limits domain consists of two schemas that are related to the notion of being deficient in the areas of self-discipline and in setting interpersonal and emotional boundaries. The two subscales are:

Entitlement. This subscale relates to the expectation that one can act without any regard for others. It is similar to a narcissistic stance.

Insufficient Self-Control. Items in this subscale tap the expectation that self-discipline is not necessary and that impulses and emotions should be allowed free reign.

3.1.3.4 Other-Directedness Domain

This domain relates to an excessive focus on the responses of others, especially their desires and feelings. This locus is often at the expense of one's own needs. This form of suppression is often in order to gain approval or love and to maintain one's sense of connection, or to avoid negative consequences such as retaliation from others. The two subscales in this domain are:

Subjugation. This subscale relates to the perception that one's own desires are less important when compared to others. The person may also feel coerced by others and consequently become compliant in order to avoid anger, retaliation or abandonment. Often this may lead to feelings of being trapped, or of anger.

Self-Sacrifice. Items in this subscale relate to a person's over emphasis on his or her duty and responsibility to others, often at the expense of his or her own

gratification. This response is often made to prevent feelings of pain or guilt from emerging. Resentment may develop as a consequence of not having his or her needs adequately met.

Approval- Seeking. (This maladaptive schema is not in the YSQ-S but is in the YSQ and is included here as it was used in the coding scheme for both studies). This maladaptive schema relates to a disproportionate focus on gaining approval, attention, or recognition from other people.

3.1.3.5 Over-Vigilance and Inhibition Domain

The final domain encompasses the suppression of one's spontaneous feelings, emotions, choices or impulses. There can also be an excessive emphasis on meeting internalised rules, along with expectations about performance and ethical behaviours. Often there is an undercurrent of pessimism and worry that one's life could fall apart if one fails to be vigilant and always on guard. The schemas in this area often jeopardise happiness, natural inclinations and optimism. The two subscales in this domain are:

Emotional Inhibition. This subscale is related to the expectation that expressing emotion will lead to negative outcomes such as embarrassment or harm to others. The inhibition of emotions, actions, feelings, or communication is usually employed to avoid disappointing others. This reaction often stems from feelings of shame, or fears of losing control of one's impulses.

Unrelenting-Standards. Items in this subscale tap the expectation that one must reach unrealistic and unattainably high standards of behaviour and performance in order to avoid criticism.

Vulnerability to Error/Negativity. *(This is the second maladaptive schema that is not in the YSQ-S but is in the YSQ and was used in the coding scheme for both studies).* This schema is represented by persistent focus on the negative aspects of life (e.g., death, guilt, loss, disappointment, etc.) while not acknowledging the positive or optimistic aspects in life or in relations with others. It can involve an undue fear of making errors that might lead to such things as financial difficulties, or loss of control. Because possible negative outcomes are overstated, these people frequently display such things as chronic worry, vigilance, and pessimism.

Punitiveness. *(This maladaptive schema is also not in the YSQ-S but was used in the coding scheme for both studies).* People with these schemas believe that others should be harshly punished for making mistakes. They tend to be angry, punitive, intolerant and impatient with those people (including oneself) who do not meet their expectations. It often includes finding it difficult to forgive errors in oneself or others for whatever reason.

3.1.4   *Reliability of the YSQ-S (Young, 1998)*

A number of studies have investigated the YSQ and the YSQ-S (Young, 1998) and found good reliability. Using a large clinical and student sample Schmidt, Joiner, Young and Telch (1995) found high to very high Cronbach's alpha coefficients that ranged from ·83 for the Enmeshment subscale to ·96 for the Defectiveness subscale. Test-retest reliability over a three-week period ranged from a low ·50 for Dependency to a high of ·82 for Emotional Deprivation.

Waller, Meyer and Ohanian (2001) recently investigated the psychometric properties of the short version of the YSQ-S on a sample of bulimic and

comparison women and found Cronbach's alpha to be greater than 80 for all the subscales for both groups of women. The researchers found that the 75-item YSQ-S was comparable psychometrically with the longer 205-item version (YSQ), with similar levels of internal consistency and parallel-forms reliability. Both scales also revealed comparable clinical utility.

3.1.5 *Analysing Early Childhood Memories*

Although the clinical application of early childhood memories has existed since the beginnings of psychology as a social science, Bruhn (1990b) wrote the first book that was exclusively devoted to the theory and application of early childhood memories comparatively recently. Bruhn suggested that early childhood memories can be analysed in a number of ways depending on the psychological perspective and intention of the researcher.

In 1992, Last and Bruhn developed the Comprehensive Early Memory Scoring System-Revised (CEMSS-R) from what they considered to be the best elements of contemporary scoring systems. They suggested that the CEMSS-R could be used as a diagnostic tool to investigate early childhood memories and encouraged researchers to modify the CEMSS-R or construct their own coding system depending on their research interests.

In terms of assessing early childhood memories, this thesis has drawn on aspects of Last and Bruhn's (1992) CEMSS-R by using their category of object relations. In this regard it has also drawn on Mayman's (1968) ideas by incorporating his psychodynamic notions that early childhood memories contain indicators of what may have led to certain character patterns.

Coding categories were selected to enable a comprehensive profile to be developed from the content of early childhood memories. It was anticipated that they would predict and differentiate people with high levels of current self-reported maladaptive schemas and psychological symptoms from people with lower levels.

3.1.6   *Early Childhood Memories Procedure*

Bruhn's (1984) Early Memory Procedure (EMP) in its full form requires participants to write down the five earliest memories that they can recall. Bruhn follows the first five memories by another 15 directed or probed memories such as first memory of mother or first punishment memory. After each memory, the participant is required to write down the clearest part of the memory, the strongest feeling in the memory and how the person would change the memory if he or she could. Bruhn (1990b) suggests that the process of writing down the early childhood memories, rather than expressing them orally to the therapist, has the advantage that the material is less likely to be censored and is often more intense in affect.

The participants in Study 1 used a modified version of Bruhn's (1984) EMP. in the time allocated for data collection. They were instructed to complete only two spontaneous early childhood memories that came to mind and one memory of mother and one of father. For the collection of early childhood memories, a smaller number of memories were requested, as Bruhn's longer EMP was developed primarily for therapeutic rather than research purposes. The researcher also believed that writing more than four early childhood memories, as well as completing Young's (1998) YSQ-S, would be too time consuming for the

respondents (students) in their regular class time and may have led to a loss of interest in the task. The specific memories of Mother and Father were chosen after considering Bruhn's (1990b) and Mayman's (1968) recommendations that specific memories such as a first memory of mother or father, reveal aspects of the person's relationship with their primary caregiver/s (object relations) and women and men generally. Given that early maladaptive schemas are purported to develop in childhood, particularly from dysfunctional relationships with primary caregivers (Beck, 1996; Epstein & Pacini, 1999;Young, 1999), and are reflected in current relationships (Bruhn, 1990a) it was considered that these directed memories were important to access.

The respondents were instructed to include as much detail as possible in their memory including how the memory began and ended. They were also requested to leave out instances that someone told them about. The instructions explained that the first two Early Childhood Memories needed to be of a specific happening or event from childhood. It began "I remember one time…. The third early memory asked about the first memory of Mother and the fourth about the first memory of Father. The full version of instructions for the early childhood memories is found in Appendix (A.3).

After each early recollection participants were also asked, "What was the clearest part of the memory?"; and "The strongest feeling in the memory?". The respondents were also asked to rate the intensity of the feeling, from 0 = "not strong at all" to 4 = "extremely strong". This question was followed by, "What thought or action is this connected with?" and "If you could change the memory in any way, what would that be?" Finally, the participants were asked to respond

to "How important is the memory?" and "How intense is the memory?". The respondents were also asked to rate the last two questions from 0 = "not strong at all" to 4 = "extremely strong".

3.1.7   Coding the Early Childhood Memories and Inter-Rater Reliability

Two coders were selected from post-graduate psychology students who were paid by the hour to code the early childhood memories. Prior to coding all the memories in Study 1, the coders looked at examples of coding and rating early childhood memories. They then coded and rated practice memories, which were consequently discussed with the researcher. If there were any difficult memories to code, the independent raters made a note of these memories which were then discussed with the researcher until agreement was reached on the coding and rating of the memory.

The two independent raters then coded the four early childhood memories for all participants in Study 1. One rater coded Young's (1990) Maladaptive Schemas in the memories and the other rater coded Last and Bruhn's (1992) Object Relations categories. A complete copy of the coding scheme for Young's (1999) maladaptive schemas is presented in Appendix (A.7). The memories were coded and rated using 18 of Young's (1995) Schemas that included three extra schemas that were used in Young's revised (1995) list but were not in his YSQ-S (Young, 1998) short-form questionnaire. These three extra schemas hypothesised by Young expanded the schema possibilities that may arise in the memories. These extra schemas were - Approval Seeking (emphasis on gaining approval); Negativity/Pessimism (focus on the negative aspects of life); and Punitiveness

(the belief that people, including oneself, should be harshly punished for making mistakes).

Each memory was rated by each coder for the intensity of the schema that was apparent in the memory using the same intensity rating scale that was used by the respondents where 0 = "not at all strong", 1 = "mild", 2 = "moderately", 3 = "quite strong", 4 = "extremely strong. Following the memories, questions were asked such as, 'What is the clearest part of the memory?', 'What is the strongest feeling in the memory?', 'How intense is the memory'. These responses were then self-rated which also aided the coders in the rating process. The coder was instructed to use the early memory as the primary indictor in rating the intensity of the schema that was present.

Early childhood memories were also coded and rated according to Last and Bruhn's (1992) CEMSS-R coding scheme of Object Relations. Last and Bruhn include a number of categories in their scoring manual, but for the purposes of this study, only their Object Relations coding scheme was used. Included in this Object relations coding scheme are five subscales: Perceptions of Others; Perceptions of the Self; Perception of Environment; Individual Distinctiveness; and Degree of Interpersonal Contact. These Object Relations categories are rated on a 3-point scale and High scores denote more positive evaluations. For example, for the Perception of Others subscale "Others are not present" would be rated as 1,whereas "Others are present and are primarily benign or need satisfiers" would be rated as 3. The ratings of the five subscales can be used individually or summed to give a total Object Relations score. A full version of this rating scheme is presented in Appendix (A.8).

Finally, a quarter of the sample's memories were randomly selected and all categories were recoded by another independent rater who was trained by the researcher. Cohen's Kappa (*k*; Cohen, 1960) was computed to assess inter–rater reliability (correcting for by-chance agreement) for each variable that was used to code and rate the early childhood memories. Reliability was acceptable for all coding categories (all *p*'s<.01). Cohen's Kappa ranged from .73 to .96 with a mean rating of .81. Any discrepancies that the second rater had with the first rater were discussed until an agreement was reached. The agreed ratings were then used for all analyses.

3.1.8   Procedure

The students completed the questionnaires in normal tutorial group times. The tutorials on average comprised 20 students. The tutor advised each group that participation was anonymous and confidentiality was ensured. They were also advised that they were free to withdraw from the study at any time. The tutor also informed the participants that he or she would leave the room whilst the students completed the questionnaires and asked if there were any questions. A student volunteer was asked to place the completed questionnaires in an envelope and seal it on completion of the task. He or she was then asked to notify the tutor that the respondents had finished and that the tutor could return to the classroom.

An information sheet was also attached to the front of the questionnaire that the participants could retain. It included the title of the project and a short description of what the study was investigating. The cover sheet also outlined what was required of the participant and that it would take approximately 35 - 45

minutes to complete. The participants were also informed that if the questions in the study elicited any difficult issues for them, they could contact the counselling service for assistance. Two telephone numbers were provided for this eventuality. There was also a note referring students to the senior supervisor if they had any questions regarding the project. In the event that there were any complaints from students about the project or their treatment, there was an address supplied at the bottom of the cover sheet for contacting the university's ethics committee.

The measures were counterbalanced to overcome the effects of order. The questionnaires were colour coded so that half the sample had the four Early Childhood Memories to complete first and then Young's (1998) YSQ-S scales whereas the other half of the sample had the YSQ-S first followed by the four Early Childhood Memories. Copies of the information page and the full version of the questionnaire are presented in the Appendix (A.1, A.2 and A.3)

3.2   Results for Study 1

This section presents the findings from Study 1. The results are presented in five parts. Part One is a preliminary analysis comprising summary statistics for the YSQ-S (Young, 1998). To primarily test for overall differences between men and women on the YSQ-S, a One-Way Analysis of Variance (ANOVA) was conducted on the total scale scores of the YSQ-S. Multivariate Analysis of Variance (MANOVA) were also conducted on the YSQ-S subscales and the Early Memory variables to investigate any differences between men and women's scores. As the YSQ-S is a relatively new instrument, Part Two is an exploratory factor analysis of the YSQ-S. Part Three analyses relationships between

information from the early memories and Young's (1990) self-reported

maladaptive schemas. These comparisons are followed by Part Four, which used

Discriminant Function Analyses (DFAs) to reveal predictors from the memories

that differentiated people with high of self-reported maladaptive schemas from

those with fewer maladaptive schemas. Finally, Part Five provides some case

studies of memories from participants that showed the predictors that emerged

from DFA's and the corresponding self-reported maladaptive schemas that

accompanied them. Please note that N sizes differ as a function of the

completeness of protocols.

3.2.1 *Part 1 Preliminary Analyses: Reliability Coefficients and Summary Statistics for the YSQ-S (Young, 1998)*

As the presentation of memories and the YSQ-S (Young, 1998) were

counterbalanced to control for order effects, a MANOVA was performed on 215

of the questionnaires to check for significant differences between the

counterbalanced groups on the YSQ-S subscales and the total Early Childhood

Memory scores. No significant differences were found Wilks' $\Lambda = .88$, $F(26, 188)$

$= .64$, $p = .91$, which indicated that there were no order effects.

Cronbach's alpha coefficients were then calculated for all the subscales of

the YSQ-S (Young, 1998) to check the scale's internal consistency. Reliability

coefficients, means and standard deviations, and measures of Skewness and

Kurtosis for the YSQ-S (Young, 1998) subscales can be seen in Table 3.1.

As seen in Table 3.1, Cronbach's alpha coefficients ranged from .77 for

the subscale of Enmeshment to .92 for the subscales of Abandonment, Social

Isolation, Defective Shame, and Failure. This range of scores is consistent with

the findings of Schmidt et al. (1995) who found high to very high Cronbach's alpha coefficients that ranged from ·83 for the Enmeshment subscale to ·96 for the Defectiveness subscale. The present alpha coefficient results reflect good internal consistency for the YSQ-S (Young, 1998) for this sample.

Table 3.1

Reliability Coefficients, Means, Skewness and Kurtosis for the YSQ-S

YSQ-S Subscales	Alpha Coefficient	Means	*SD*	Skewness	Kurtosis
Emotional Deprivation	.89	10.39	5.53	1.22	.91
Abandonment	.92	12.35	6.41	.89	-.15
Mistrust Abuse	.89	12.22	5.43	.95	.51
Social Isolation	.92	11.13	5.25	1.23	1.89
Defective Shame	.92	8.29	4.49	2.04	5.14
Failure	.92	9.55	4.39	1.36	2.74
Dependence Incompetence	.80	8.79	4.05	1.57	4.17
Vulnerability to Harm	.82	10.22	4.82	1.23	1.30
Enmeshment	.77	8.54	4.02	1.65	3.15
Subjugation	.83	10.22	4.82	1.23	1.30
Self Sacrifice	.82	16.71	4.86	.29	-.33
Emotional Inhibition	.84	10.39	4.61	.61	-.39
Unrelenting Standards	.85	17.29	5.99	.15	-.73
Entitlement Grandiosity	.79	13.49	4.94	.68	.04
Insufficient Self-Control	.83	13.59	5.09	.56	.09
YSQ Total Scale Score	.96	171.21	45.20	.61	.32

N=249; *Note*: *SD* = Standard Deviation; A minimum possible score was 5 and a maximum possible was 30 for each subscale; For the YSQ Total Scale Score the minimum possible score was 75 (actual minimum score was 78) and the maximum possible score was 450 (actual maximum score was 335).

The means for the YSQ-S subscales varied between 8.29 for Defective/ Shame to 17.29 for Unrelenting Standards. Defective/Shame also had the most positive Skewness in that the distribution of scores tended to be mostly low scores compared to the other sub-scales. A minimum possible score was 5 and a maximum possible was 30 for each subscale. Finding a low mean score for Defective/Shame, and a higher mean score for Unrelenting Standards, is compatible for this population of university students. At this level of tertiary education, students generally set high goals for themselves and view themselves as capable of achieving these goals. (Percentages of maladaptive schemas that were present in the in the YSQ for men and women can be seen in Appendix A.6).

A one-way ANOVA was performed on the total scale score of the YSQ-S (Young, 1998) to check for significant differences between men and women's scores. Overall, there was not a significant difference between men ($m = 169.94$) and women ($m = 172.19$) on the total score of the YSQ-S, $F(1, 243) = .118$, $p = 73$. Using a 95% confidence interval of the difference score, the lower was $- 15.15$ and the upper was 10.56. However, when the 15 subscales were analysed using a MANOVA there were significant gender differences found among three of the YSQ-S subscales, Wilks' $\Lambda = .84$, $F(14, 234) = 3.11$, $p < .001$. Consequently, univariate tests were calculated. These differences are reported in Table 3.2.1.

As can be seen in Table 3.2.1, women had significantly higher levels of self-reported Dependence/Incompetence, Self-Sacrifice and lower levels of Entitlement maladaptive schemas than the men in this study. This would suggest that on average women felt more of a sense of reliance on others and perceived

themselves as sacrificing their own needs in place of others more than the men reported. In contrast, men on average had more of a sense of superiority and control than the women in this study.

Table 3.2.1

Significant Differences found between Men and Women on the YSQ-S subscales

YSQ-S Subscales	Subscale Scores (SD)		F Value	P Value
	Men (n = 51)	Women (n=198)		
Dependence/Incompetence				
Mean	7.75	9.06	4.30	.039
SD	(3.21)	(4.21)		
Self-Sacrifice				
Mean	15.10	17.12	7.20	.008
SD	(4.21)	(4.94)		
Entitlement				
Mean	14.98	13.11	5.91	.016
SD	(5.11)	(4.84)		

$N = 249$ *Note*: Degrees of Freedom = (1, 248) for each of the above analyses.

Additionally, the variables represented in the Early Memories were analysed for gender differences. One-way between-groups MANOVAs were conducted for each of the early childhood memories. Gender was the between groups factor and the Early Memory Schemas and Object Relations represented in the memories were specified as the dependent variables. For First Early Memory (EM1), the results for the MANOVA indicated that there were no significant Gender differences, Wilks' $\Lambda = .90$, $F(18, 228) = 1.42$, $p = .126$. A MANOVA

conducted on the Object Relations variables for the first Early Memory again showed no gender differences, Wilks' Λ =.97, $F(5, 241) = 1.63$, $p = .153$.

For the Second Early Memory (EM2), again no gender differences were found using MANOVA on the Early Memory Schemas represented in Early Memory 2, Wilks' Λ =.93, $F(18, 222) = 0.93$, $p = .54$ or for the Object Relations themes, Wilks' Λ = .97, $F(5, 235) = 1.56$, $p = .173$. The results for the MANOVA conducted on Early Memory of Mother showed no significant gender differences for the schemas represented in the memories, Wilks' Λ = .92, $F(18, 203) = 1.00$, $p = .461$ or for the Object Relations variables, Wilks' Λ = .98, $F(5, 216) = .75$, $p = .586$.

Lastly, a MANOVA performed on Early Memory Father indicated that there were no significant gender differences on the Early Memory Schemas, Wilks' Λ = .91, $F(18, 198) = 1.05$, $p = .409$ or the Object Relations variables, Wilks' Λ = .98, $F(5, 211) = .92$, $p = .466$. Summary statistics for themes represented in all four Early Memories for Men and Women can be seen in Table 3.2.2.

The MANOVA results for the themes represented in the Early Memories indicate that there were no gender differences on the themes represented in all four early childhood memories. Additionally, given that so few differences were evident between men and women on the YSQ, in further analyses men and women were primarily combined into the same analysis. This was also decided upon as the sample of men was much smaller than that for women.

Table 3.2.2

Means and Standard Deviations for Themes Represented in All Four Memories for Men and Women

EM Themes	EM1 Men (*n*=49) M SD	EM1 Women (*n*=198) M SD	EM2 Men (*n*=48) M SD	EM2 Women (*n*=193) M SD	EM Mother Men (*n*=43) M SD	EM Mother Women (*n*=179) M SD	EM Father Men (*n*=41) M SD	EM Father Women (*n*=176) M SD
ED	.88; 1.41	.73; 1.26	.31; .95	.69; 1.27	.84; 1.29	.55; 1.17	.66; 1.15	.63; 1.23
AB	.88; 1.48	.67; 1.26	.27; .92	.73; 1.36	.79; 1.32	.76; 1.40	.51; 1.14	.57; 1.14
MA	.35; .95	.47; 1.10	.21; .71	.38; 1.02	.21; .66	.23; .81	.17; .70	.41; 1.11
SI	.27; .81	.16; .89	.29; .82	.26; .80	.05; .21	.06; .38	.07; .47	.06; .33
DS	.20; .82	.30; .88	.40; 1.12	.44; 1.06	.07; .34	.22; .71	.05; .31	.22; .78
FA	.14; .61	.11; .54	.10; .52	.16; .69	.00; .00	.06; .36	.12; .56	.05; .33
DI	.33; .92	.36; .92	.44; 1.09	.32; .89	.51; 1.06	.47; 1.06	.32; .82	.19; .68
VH	.96; 1.40	.46; 1.07	.73; 1.32	.64; 1.23	.40; .98	.34; .91	.20; .75	.36; .94
EM	.04; .29	.14; .57	.00; .00	.06; .35	.28; .83	.20; .62	.29; .78	.16; .59
SUB	.16; .55	.23; .78	.15; .58	.19; .70	.05; .31	.21; .73	.00; .00	.18; .69
SS	.06; .43	.14; .59	.04; .29	.15; .58	.00; .00	.15; .62	.05; .22	.15; .64
EI	.08; .45	.08; .45	.08; .45	.05; .36	.05; .31	.04; .32	.02; .16	.05; .34
US	.16; .72	.06; .41	.31; .88	.13; .55	.09; .43	.06; .35	.27; .88	.13; .57
ET	.08; .40	.24; .70	.25; .70	.26; .78	.26; .62	.11; .46	.34; .79	.16; .57
IS	.10; .51	.22; .68	.29; .82	.19; .64	.14; .47	.13; .53	.05; .31	.14; .61
AS	.10; .51	.18; .67	.19; .76	.14; .63	.05; .31	.06; .33	.12; .56	.12; .56
NEG	.00; .00	.17; .62	.27; .17	.18; .71	.00; .00	.08; .44	.07; .47	.09; .47
PUN	.12; .63	.05; .32	.00; .00	.04; .34	.05; .31	.06; .41	.00; .00	.06; .38
PoO	2.14; .87	2.30; .82	2.04; .97	2.28; .80	2.37; .87	2.53; .74	2.61; .77	2.44; .81
PoS	1.70; .72	1.81; .82	2.02; .89	1.89; .82	1.65; .87	1.58; .81	1.73; .92	1.69; .83
PoE	2.03; .77	2.27; .77	2.17; .88	2.17; .76	2.03; .80	2.31; .79	2.46; .87	2.26; .83
ID	1.63; .60	1.85; .65	1.58; .65	1.74; .59	1.84; .72	1.93; .66	1.84; .71	1.93; .64
DoIC	1.86; .74	2.10; .73	1.79; .74	2.00; .68	2.14; .80	2.12; .77	2.12; .87	2.20; .72

N = 247; Note: EM = Early Memory; EM1 = First Early Memory; EM2 = Second Early Memory; EM Mother = First Early Memory of Mother; EM Father = First Early Memory of father; ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust/ Abuse, SI= Social Isolation, DS = Defectiveness/Shame, FA = Failure, DI = Dependence / Incompetence, VH = Vulnerability to Harm, EM = Enmeshment, SUB = Subjugation, SS = Self-Sacrifice, EI = Emotional Inhibition, US Unrelenting Standards, ET = Entitlement, IS = Insufficient Self-Control, AS = Approval Seeking, NEG = Negativity, PUN = Punitiveness; PoO = Perception of Others, PoS = Perception of Self, PoE = Perception of the Environment ID = Individual Distinctiveness, DoI = Degree of Interpersonal Contact; Young's schemas were coded on a 5-point scale where 0= Not at all strong to 4 = Extremely Strong; Object relations were coded on a 3-point scale e.g., 1= 'others are not present' to 3= 'others are need satisfiers'.

Although the Australian study by Lee et al. (1999) largely confirmed the factor structure of the longer version of the YSQ (Young, 1990) using an Australian clinical sample, the factor structure of the short form of the YSQ, has not been examined with a non-clinical Australian sample. The following section investigates the factor structure of the YSQ-S (Young, 1998) with an Australian sample.

3.2.2 *Part 2: Exploratory Factor Analysis for the YSQ-S (Young, 1998)*

A factor analysis using Maximum Likelihood and an Oblique rotation was performed on the data from the YSQ-S (Young, 1998) using SPSS (Version 12). The factors were set to 15 as previously suggested by Young (1998). For ease of interpretation, and given that the sample size was 249, any factor loadings below .35 were deemed non-significant (Tabachnick & Fidell, 1996) and are not shown in the Tables. For the entire factor analysis results, including all factor loadings, see Appendix A7.5.

Fifteen factors were extracted with eigenvalues greater than one and together they explained 63.54 percent of the total variance. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .88 and Bartlett's Test of Sphericity was (df=2775) = 13712.71, $p < .0001$. $\chi 2(2775) = 2486.14$, $p < .0001$. Tables 3.3.1. to 3.3.5. present each of the five domains and their respective maladaptive schema subscales. Table 3.3.6 displays items that migrated.

3.2.2.1 Results for the Disconnection and Rejection Domain

Table 3.3.1

Factor Loading Results for the Disconnection and Rejection Domain

Items	Factors and Factor Loadings for the Disconnection-Rejection Domain				
	ED	**AB**	**MA**	**SI**	**DS**
q1 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.	.82				
q2 In general, people have not been there to give me warmth, holding and affection.	.76				
q4 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.	.69				
q5 I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.	.64				
q3 For much of my life, I haven't felt that I am special to someone.	.59				
q7 I need other people so much that I worry about losing them.		.90			
q8 I worry that people I feel close to will leave me or abandon me.		.89			
q6 I cling to people I'm close to because I'm afraid they'll leave me.		.88			
q9 When I feel someone I care for pulling away from me I get desperate.		.69			
q10 Sometimes I am so worried about people leaving me, I drive them away.		.58			
q14 I am quite suspicious of other people's motives.			.97		
q15 I'm usually on the lookout for people's ulterior motives.			.85		
q13 It is only a matter of time before someone betrays me.			.50		
q12 I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.			.45		
q11 I feel that people will take advantage of me.			.41		
q16 I don't fit in.				.80	
q20 I always feel on the outside of groups.				.78	
q19 I feel alienated from other people.				.78	
q18 I don't belong; I'm a loner.				.76	
q17 I'm fundamentally different from other people.				.53	
q23 I'm unworthy of the love, attention, and respect of others.					.62
q22 No one I desire would want to stay close to me if they knew the real me.					.55
q24 I feel that I am not loveable.					.53
q21 No man/woman I desire could love me if he/she saw my defects.					.51
q25 I an too unacceptable in very basic ways to reveal myself to others.					.39

N = 249; *Note:* DS = Defectiveness; MA = Mistrust Abuse; AB = Abandonment; ED = Emotional Deprivation; SI = Social Isolation

As can be seen in Table 3.3.1, all items from the Disconnection and

Rejection Domain loaded onto their respective subscales as was previously

hypothesised by Young (1998). The loadings ranged from .39 for item 25 to .97

for item 14.

3.2.2.2 Results for the Impaired Autonomy and Performance domain

Table 3.3.2

Factor Loading Results for the Impaired Autonomy and Performance Domain

Items	Factors and Factor Loadings for the Impaired Autonomy and Performance Domain			
	FA	DI	VH	EM
q28 Most other people are more capable than I am in areas of work & achievement.	.90			
q29 I'm not as talented as most people are at their work.	.90			
q30 I'm not as intelligent as most people when it comes to work (or school).	.84			
q26 Almost nothing I do at work (or school) is as good as other people can do.	.64			
q27 I'm incompetent when it comes to achievement.	.53			
q33 I lack common sense.		.83		.
q34 My judgment cannot be relied upon in everyday situations.		.81		
q35 I don't feel confident about my ability to solve everyday problems that occur.		.61		
q32 I think of myself as a dependent person when it comes to everyday functioning.		.37		
q31 I do not feel capable of getting by on my own in everyday life.		**.29***		
q37 I feel that a disaster (natural, criminal, financial) could strike at any moment.			.64	
q40 I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.			.60	
q38 I worry about being attacked.			.49	
q36 I can't seem to escape the feeling that something bad is about to happen.			.44	
q39 I worry that I'll lose all my money and become destitute.			.43	
q41 I have not been able to separate myself from my parent(s), the way other people my age seem to.				.70
q42 My parent(s) and I tend to be over-involved in each other's lives and problems.				.55
q43 It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.				.46

N = 249 *Note:* DI = Dependence/Incompetence; VH = Vulnerability to Harm; EM = Enmeshment; FA = Failure to Achieve; ***** = Non-significant factor loading for item 31.

As shown in Table 3.3.2, four factors emerged in the Impaired Autonomy

and Performance Domain as Young (1998) intended. Item 31 from the

Dependence/Incompetence subscale loaded onto the factor but was not significant

given the sample size. Items 28 and 29 had the highest loadings at .90 each. The

Enmeshment subscale had two items that migrated to form another factor

(Enmeshed Parental Subjugation). This can be seen in Table 3.3.6.

3.2.2.3 Results for the Other-Directedness Domain

Table 3.3.3

Factor Loading Results for the Other-Directedness Domain

Items	Factor and Factor Loadings for the Other-Directedness Domain	
	SJ	SS
q46 I think if I do what I want, I'm only asking for trouble.	.47	
q47 I feel that I have no choice but to give in to other peoples' wishes, or else they will retaliate or reject me in some way.	**.33***	
q49 I've always let others make choices for me, so I really don't know what I want for myself.	**.31***	
q53 I'm so busy doing for the people that I care about that I have little time for myself.		.74
q52 I am a good person because I think of others more than of myself.		.71
q54 I've always been the one who listens to everyone else's problems.		.69
q55 Other people see me as doing too much for others and not enough for myself.		.63
q51 I'm the one who usually ends up taking care of the people I'm close to.		.57

N = 249 *Note*: SS = Self-Sacrifice; SJ = Subjugation; * = Non-significant Factor loadings for items 47 & 49

The two subscales of Subjugation and Self-Sacrifice were hypothesised by

Young (1998) to belong to the Other-Directedness Domain. The items for the

Self-sacrifice subscale all loaded as Young (1998) had previously hypothesised.

However, as displayed in Table 3.3.3, there was only one item that significantly

loaded on the Subjugation Factor and two of the hypothesised items loaded but

were non-significant for this sample size. There were also two items (44 & 45)

that migrated from the hypothesised Enmeshment subscale to significantly load

with these three items from the Subjugation subscale, thus compromising this

factor as Young (1998) had hypothesised.

3.2.2.4 Results for the Overvigilance and Inhibition Domain.

The next factors to emerge were related to the Over-Vigilance and

Inhibition domain and can be seen in Table 3.3.4.

Table   3.3.4

Factor Loading Results for the Over-Vigilance and Inhibition Domain

Items	Factors and Factor Loadings for the Over-Vigilance and Inhibition Domain	
	EI	US
q57 I find it embarrassing to express my feelings to others.	-.82	
q56 I am too self-conscious to show positive feelings to others.	-.73	
q58 I find it hard to be warm and spontaneous.	-.66	
q59 I control myself so much that people think I am unemotional.	-.42	
q60 People see me as uptight emotionally.	-.41	
q62 I try to do my best; I can't settle for "good enough."		-.80
q63 I must meet all my responsibilities.		-.74
q64 I feel there is constant pressure for me to achieve and get things done.		-.71
q61 I must be the best at most of what I do; I can't accept second best.		-.70
q65 I can't let myself off the hook easily or make excuses for my mistakes.		-.68

N = 249 *Note:* EI = Emotional Inhibition; US = Unrelenting Standards.

The first factor comprised all items from Young's (1998) original

Emotional Inhibition subscale and the second factor contained all the original

items from the Unrelenting Standards subscale. The item loadings ranged from

.42 for item 60 to .82 for item 57.

3.2.2.5 Results for the Impaired Limits Domain

The final factors to emerge were from the Impaired Limits Domain. All items from the hypothesised subscales loaded on their respective factors except for one item from the Entitlement subscale. This item loaded on the appropriate factor but was below the significance level for this sample size. These results can be seen in Table 3.3.5

Table 3.3.5

Factor Loading Results for the Impaired Limits Domain

Items	*Factors and Factor Loadings for the Impaired Limits Domain*	
	ET	*IS*
q67 I'm special and shouldn't have to accept many of the restrictions placed on other people.	.93	
Q69 I feel that I shouldn't have to follow the normal rules and conventions other people do.	.81	
Q70 I feel that what I have to offer is of greater value than the contributions of others.	.47	
Q68 I hate to be constrained or kept from doing what I want.	.47	
Q66 I have a lot of trouble accepting "no" for an answer when I want something from other people.	**29***	
q74 I can't force myself to do things I don't enjoy, even when I know it's for my own good.		**.73**
Q75 I have rarely been able to stick to my resolutions.		.70
Q71 I can't seem to discipline myself to complete routine or boring tasks.		.66
Q73 I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.		.65
Q72 If I can't reach a goal, I become easily frustrated and give up.		.62

N = 249 *Note:* ET = Entitlement; ***** = Non-significant Factor Loading for Item 66 IS = Insufficient Self-Control.

The factor loadings ranged from .29 for item 66 to .93 for item 67. Both items were from the Entitlement subscale. The final Table 3.3.6 in this factor analysis section displays the small number of items (four) that migrated from Young's (1998) original subscales to another factor.

Table 3.3.6

Original factor Items and their Migration

Original Factor and Items	New Factor Migration and Factor Loadings	
	EPS	EI
EM: q44 I feel as if my parent(s) are living through me-I don't have a life of my own.	.72	
EM: q45 I often feel that I do not have a separate identity from my parents or partner.	.56	
SJ: q48 In relationships, I let the other person have the upper hand.		**.29***
SJ: q50 I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.		**.26***

N = 249; *Note:* EM = Enmeshment; SJ = Subjugation; EI = Emotional Inhibition; EPS = Enmeshed Parental Subjugation; * = non-significant factor loading

Items 44 and 45 migrated from the Enmeshment subscale to load (significantly) with three items from the Subjugation subscale. These two Enmeshment items tend to have a more subjugated element to them than the other items from the Enmeshment subscale. The three Subjugation items comprised one significant item (46) and two non-significant Items (47 & 49). This new factor was an amalgamation of feeling enmeshed with one's parents and also subjugated by them and was therefore renamed - Enmeshed Parental Subjugation. Two items also migrated from the hypothesised Subjugation subscale to load (non-

significantly) with the Emotional Inhibition factor. As these migrating items were also from the original Subjugation subscale, they also bring to the Emotional Inhibition subscale a subjugation element.

In summary, the factor analysis results supported the existence of 14 of the 15 factors hypothesised by Young (1998). Fifteen factors were extracted with eigenvalues greater than one including one unexpected factor – Enmeshed Parental Subjugation that collectively explained 63.54 percent of the total variance. The variance explained was greater than either the Schmidt et al.'s (1995) study or the Lee et al.'s (1999) study.

Similar to Schmidt et al.'s (1995) study of the YSQ, subjugation did not emerge as a single factor. Items from this subscale loaded with some of the Enmeshment items that had split into two separate factors. Three of the original Enmeshment items formed the Enmeshment factor and two Enmeshment items migrated to form a factor with one subjugation item (significant) "I think if I do what I want, I'm only asking for trouble". The new factor relates to feelings of enmeshment with and being subjugated by parents and authority figures.

Considering that the majority of the sample comprised young adults, this result may reflect their struggle with separating from their parents and still feeling controlled by them to a certain degree. The overall factor structure confirms the utility of the YSQ-S (Young, 1998) and finding similar results to previous studies (e.g., Schmidt et al.) endorses its validity. The next section examines the relationships that were found among the maladaptive schemas represented in the memories and self-reported maladaptive schemas for the total sample.

3.2.3   Part 3: Relationships between Early Childhood Memory Schemas and the YSQ

This section examines relationships among variables coded from early memories and self-reported schemas. Bruhn and Schiffman (1982a) suggest that correlations between variables coded from early childhood memories and measures of present functioning are not usually of great magnitude. They reason that a decrease in the magnitude of relationships is often due to having a large number of variables that contribute to the variance of measures of psychological functioning and that studies frequently use students samples that tend to have more homogeneous qualities than a community sample. However, in terms of revealing patterns of relationships, correlations are valuable for exploratory purposes.

First, to examine the relationships among schemas represented in the Early Childhood Memories and self-reported Schemas, a total Schema Score was obtained for the memories by collapsing all four memories together and summing the intensity of the schema ratings. This score was then correlated with the self-reported YSQ-S (Young, 1998) total scores. This resulted in a weak positive linear relationship using Pearson's r, $r(249) = .25$, $p < .001$.

To more fully explore the linkages among schemas coded from the early memories self-reported maladaptive schemas from the YSQ-S (Young, 1998), Polyserial correlations were computed between the sum of intensities of each schema represented in the early memory and each self-reported maladaptive schema subscales of the YSQ-S (Young, 1998). Polyserial correlations were chosen because this form of correlation best analyses the relationships between ordinal and interval data (Tabachnick & Fidell, 1996). Maladaptive schemas were

coded from the memories on an ordinal five-point scale for Young's (1990)

schemas and an ordinal three-point scale for the object relations (Last & Bruhn,

1992) measure. These measures were individually correlated with the self-

reported maladaptive schemas from the YSQ-S that were measured on a interval

scale.

Correlations were only conducted if at least 10 percent of the total sample

had representations of a schema in the memory as any less than this would make

the analysis statistically unviable. It is was also considered that when a number of

correlations are reported, the probability of a Type 1 error increases and that in

correlational analyses, the Bonferroni approach is frequently used to control for

Type 1 error. However, as Harris (1985, p. 154) argues 'the major disadvantage of

the Bonferroni approach is its restriction to pre-specified sets of comparisons,

which thereby reduces its utility for post hoc exploration of the obtained data".

Given that the study was exploratory, the decision was made to conduct a number

of correlations. However, a more conservative significance level was adopted at p

$< .01$, rather than at $p < .05$ level.

Table 3.4. displays the significant Polyserial correlations among

maladaptive schemas represented in the First and Second Early Childhood

Memories and self-reported maladaptive schemas from the YSQ-S (Young,

1998). The first and second memories were placed together as these were the

spontaneous memories as opposed to the probe memories asking for first

recollections of Mother and then Father. The first early memory is signified by the

letter **a** and the second memory by the letter **b**.

Table 3.4

Polyserial Correlations Among Self-reported Maladaptive Schemas and

Maladaptive Schemas Represented in the 1ˢᵗ and 2ⁿᵈ Early Childhood Memories

	Maladaptive Schemas represented in 1ˢᵗ and 2ⁿᵈ Early Childhood Memories											
	ED	AB	MA	SI	DS	DI	VH	SJ	ET	IS	PO	PE
Self–reported												
ED	.24a	.28b	.28a	.33a .23b	.22a	.22b		.26b				
AB		.24b	.23b	.38a .21b	.20a			.26b				
MA		.21b	.22a .23b	.45a .30b				.25b				-.21a
SI				.34b	.50a			.25a			-.23b	
DS			.29a .23b	.35b	.39a	.21a		.21a				
FA		.21b	.23a	.36b	.33a		.23b			.26b		
DI				.20b				.20b				
VH	.20b	.23b	.28a	.35b	.22a	.22a		.21b				-.20b
EM			.27a .32b	.31b	.29b							
SJ	.20b	.23b	.28a	.35b	.22a	.22a		.21b				-.20b
SS	.20b		.22a	.30a .24b								
EI	.21a	.21b	.23a	.30b				.35b				
ET					.22b					.22b		
IS				.37b								
US			.24a									

N = 236. *Note:* ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust/ Abuse, SI= Social Isolation, DS = Defectiveness/Shame, FA = Failure, DI = Dependence / Incompetence, VH = Vulnerability to Harm, EM = Enmeshment, SJ = Subjugation, SS = Self-Sacrifice, EI = Emotional Inhibition, ET = Entitlement, IS = Insufficient Self-Control, US Unrelenting Standards, PO = Perception of Others, PE = Perception of the Environment; a = First Early Memory, b = Second Early Memory. All the above Polyserial correlations were significant at the level of p <.01 and only correlations greater than .20 are reported.

The pattern of relationships from the first two early memories and self-reported schemas indicates that there is a high number of links between schemas in the memories from the 'Disconnection and Rejection' domain and self-reported schemas when compared with the other domains. Social Isolation and Mistrust Abuse schemas represented in the memories, had the largest number of relationships (17 & 14 respectively) with self-reported maladaptive schemas compared with other schemas in this domain. The strongest relationships were also found in this domain. This was between Defectiveness / Shame from the first memory and self-reported Social Isolation (r=.50). This suggests that feeling defective on an unconscious level is related to feeling isolated or different from other people. The next strongest relationship was between Social Isolation in the first memory and self-reported Mistrust and Abuse (r=.45). This link may indicate that feeling different and isolated from other people on an unconscious level is related to a self-reported expectation that other people will hurt, abuse, or take advantage of them.

The highest Object Relations correlation was weak in strength between a 'Low Perception of Others' and self-reported Social Isolation (r = -.23). This relationship indicates that people are not represented in memories (on an unconscious level) and this lack was associated with self-reported feelings of being different or isolated from other people. The next Table 3.5 displays the schemas that were found in the Memories of Mother and Father and their relationship with self-reported maladaptive schemas.

Table 3.5

Polyserial Correlations Among Self-reported Maladaptive Schemas and

Maladaptive Schemas Represented in Early Memories of Mother and Father

Maladaptive Schemas represented in Early Childhood Memories of Mother and Father

	ED	AB	MA	DS	DI	VH	EM	SJ	ET	PO	PE	ID
Self-Reported												
ED	.30c	.23c	.20c			.21d					-.22d	-.29d
AB			.27c	.31d				.20c				
MA	.21c .23d			.28d	.43d	.24d	.30c	.24c				
SI						.36d						-.29d
DS				.27d		.33d						
DI				.33d								.20c
VH				.27d		.23d		.21c		-.21d	-.21d	
EM			.26c	.30d								
FA					.45d							.37d
SJ				.27d		.23d		.21c		-.21d	-.21d	
EI								.24c				
US	.21d		.25d	.24d		-.22c		.21c				
ET					.20c							-.29d
IS			-.24d	-.25c						.20c		-.20d

N= 217; *Note:* ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust/Abuse, SI= Social Isolation, DS = Defectiveness/Shame, DI = Dependence/ Incompetence, VH = Vulnerability to Harm, EM = Enmeshment, SJ = Subjugation, EI = Emotional Inhibition, ET = Entitlement, IS = Insufficient Self-Control, PO = Perception of Others, PE = Perception of the Environment, ID = Individual Distinctiveness; c = Early Childhood Memory of Mother, d = Early childhood Memory of Father. All the above Polyserial correlations were significant at the level of p <.01 and only correlations greater than .20 are reported.

The pattern of relationships of Mother and Father directed memories differ when compared with those from the spontaneous first and second early memories. The relationships evident in Table 3.5 need to be considered on a background of memories that particularly focuses on mother and father and may, therefore, reflect issues that are related to parents or male and female relationships in general (Bruhn, 1984).

One major difference between Tables 3.4 and 3.5 is that Social Isolation from the first and second early memories is not represented at all in the Mother and Father memories. The schemas from the 'Disconnection and Rejection' domain are still the most represented of the domains from the memories, but Defectiveness/Shame schemas are the most represented individual schemas in this domain instead of Social Isolation that was found in the first two memories. The strongest relationship in this domain is between Defectiveness/Shame (Father memory) in the memories and self-reported Dependence and Incompetence ($r = .33$). This indicates that feeling defective or inferior in relation to father on an unconscious level is linked to self-reported feelings of being unable to cope with everyday occurrences without other people's help. One of the few correlations to match schemas from the memories and self-reports was the relationship between Emotional Deprivation (Mother memory) and self-reported Emotional Deprivation ($r = .30$). This suggests that underlying self-reported Emotional Deprivation are possible feelings of a lack of nurturance, empathy and protection from mother, on a deep level.

The strongest relationship overall was between unconscious feelings of Dependence and Incompetence (again Father memory) and self-reported feelings of being a Failure ($r = .45$). The second strongest relationship between maladaptive schemas in the memories and self-reported schemas was with Dependence/Incompetence (memory of father) and Mistrust/Abuse (self-reported) [r = .43]. Unconscious representations of dependency or a lack of mastery in relation to recollections of father were linked with present indications of feeling like he or she was a failure and there was a lack of being able to trust others.

Relationships among Object Relations in the memories and self-reported schemas were generally weak in strength. Other than relationships between Individual Distinctiveness and self-reported schemas, which were difficult to interpret, the strongest relationships were between a 'Perception of the Environment' as unsafe and self-reported Emotional Deprivation ($r = -.22$), Vulnerability to Harm ($r = -.21$) and Subjugation ($r = -.21$). These associations indicate that having an underlying feeling that the environment is hostile or unsafe is linked with a number of self-reported feelings of emotional and physical deprivation, fear of impending catastrophe and feeling controlled or subjugated by other people.

3.2.4   Part 4: Self-Reported Schema Domain Group Comparisons and Corresponding Early Memories Scores

After ascertaining relationships among representations of schemas in the memories and self-reported maladaptive schemas, the sample was divided into four groups based on people's YSQ-S domain T-scores. The 'lowest' group's ($n = 11$) YSQ-S T-scores were at least one standard deviation below the mean (< 40). The 'low' group ($n = 40$) had scores between the mean and one stand deviation below the mean (T-scores= 40 – 50). The 'medium' group ($n = 140$) had scores on the YSQ-S domains ranging from the mean to two standard deviations above the mean (50 – 70) and the 'highest' group (n = 53) had scores at least two standard deviations above the mean (T-scores = 70+). The four groups' early memory schema scores were then calculated. Figure 3.1 displays the four domain T-score groups and their corresponding domain scores from their early childhood memories as box and whisker plots.
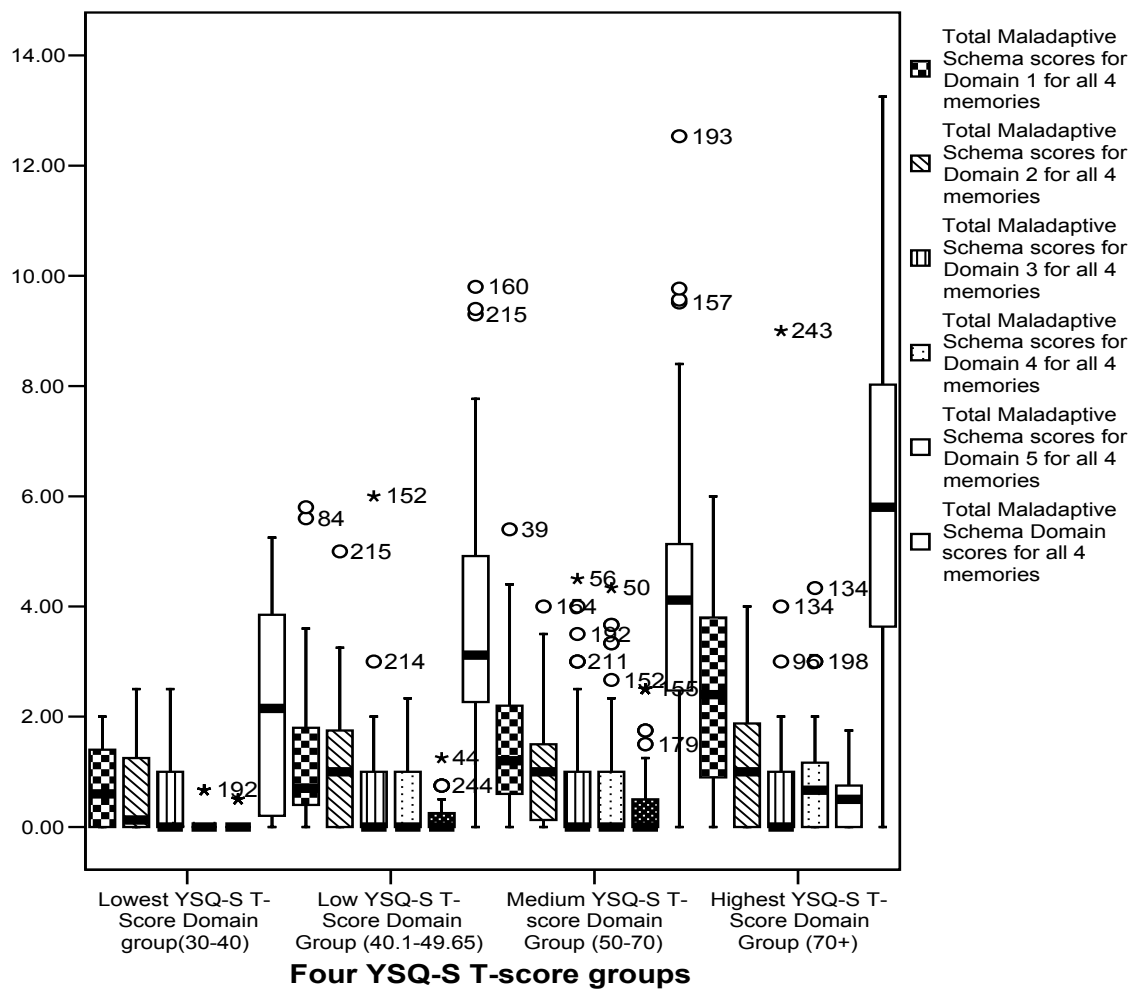
Figure 3.1   Four YSQ-S T-Score domain groups and their associated Early
Memories Total Scores

The striking aspect of Figure 3.1 is the steady upward progression of

domain 1 scores 'Disconnection and Rejection' in the Early Childhood Memories

as the groups self-reported Domain Scores also increase. This pattern is also

obvious for the total domain scores from the memories that also increase as the

groups' self-reported domains scores increase.

As the memories were also analysed for Last and Bruhn's (1992) object

relations themes, groups were formed as in the previous analysis on the basis of

domain T-scores. An object relations score was obtained for each object relations

category by summing the scores in that category across all four memories. For

example, 'Perception of the Environment', which was represented in all four

memories, was summed to give a total 'Perception of the Environment' score. A

high score indicates a more supportive environment than a low score. Therefore,

in each Object Relations category low scores indicate more dysfunction in that

area of the memory. Scores from the 'Perception of Self', 'Others' and the

'Environment' were summed to arrive at a Total Self, Other and Environment

Score. 'Individual Distinctiveness' and 'Degree of Interpersonal Contact' were

omitted from this Total Object Relations Score, as these categories did not reflect

overall dysfunction as was apparent with the other three categories. Again, low

scores on the Total Self, Other and Environment Score reflect more dysfunction in

the memory. Figure 3.2 displays relationships between the four groups and their

corresponding Object Relations Total Scores.
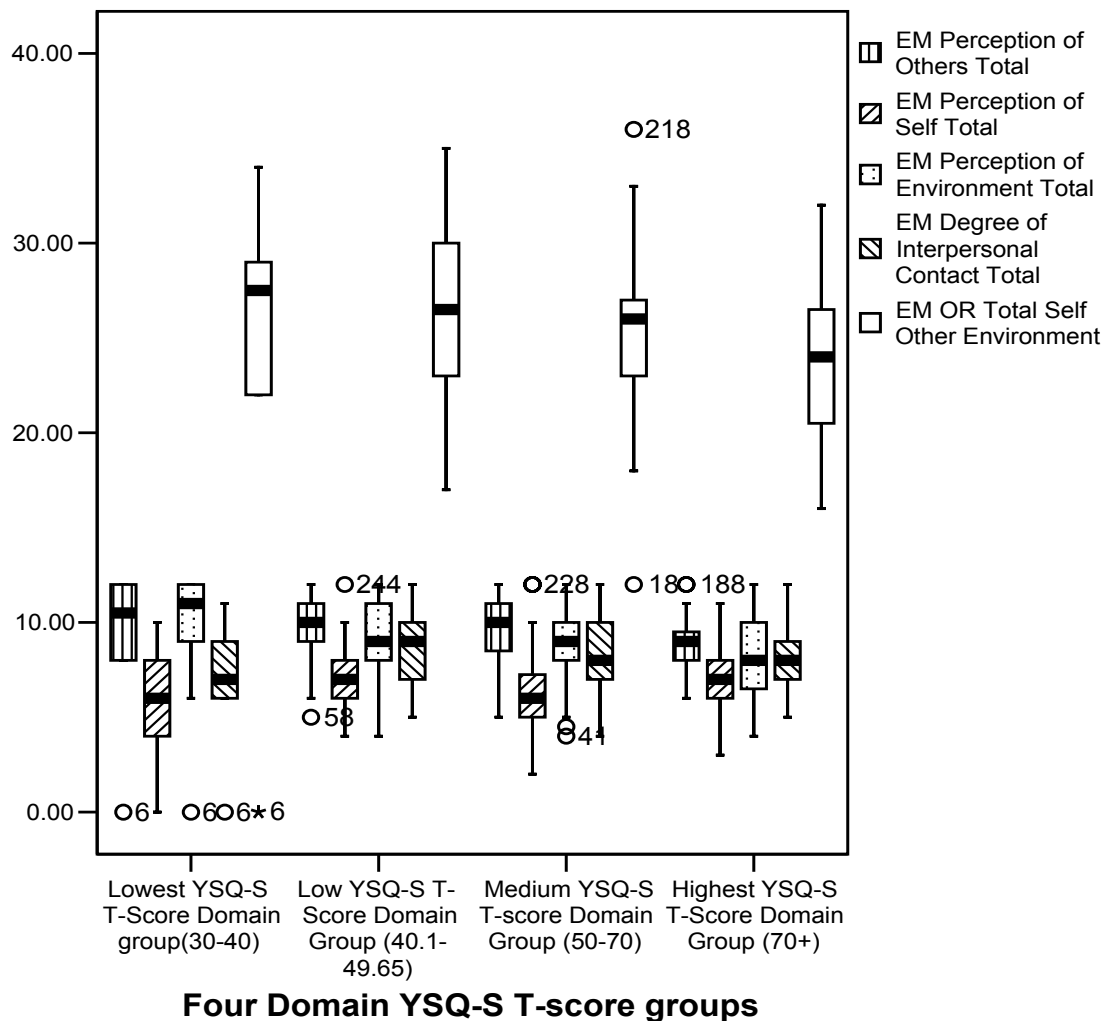
Figure 3.2   Four YSQ-S T-Score domain groups and their associated Early
Memories Object Relations Total Scores

As can be seen in Figure 3.2, the pattern of relationships is not as clear as it is

with the maladaptive schemas represented in figure 3.1. However, the means of the

Total scores of Self, Other and Environment from the memories decrease as the self-

reported schema domain scores increase. This indicates that, on average, as people self-

report more dysfunction, their memories also reflect more dysfunction. 'Perception of

Others' and 'Perception of the Environment' also follow a similar trend to the Total

Self, Other and Environment Score patterns, but there tends to be considerable overlapping scores when looking across categories.

As some clear trends emerged in Figure 3.1, a finer analysis was conducted that compared the group with highest levels of self-reported YSQ-S (Young, 1998) maladaptive schemas domain scores with the group with the lowest levels. It was assumed that people with the highest levels of self-reported maladaptive schemas would be more likely to be the ones seeking psychological help and therefore their corresponding maladaptive schemas scores represented in their memories were of most interest. The 'low' group, which was of equal size, served as a clear comparison group. The medium group was not used in this analysis because at its extremes it would have an overlap of people with scores nearing the cutoff points of either the low or the high group. Thus, this overlapping may not clearly show group differences. For this analysis, the lowest two domain score groups (Lowest & Low) were combined and are referred to as the 'Low Group'. In total there were 51 people in the 'Low group'. Their self-reported maladaptive schemas (domain T-score totals) were less than 50. In comparison, the High group comprised 53 people with self-reported maladaptive schemas (domain T-score totals) greater than 70. A comparison of the two group's early memory maladaptive schemas scores is displayed in Table 3.6.

Table 3.6

Totals of Young's Maladaptive Schemas represented in all four memories for the Low

YSQ-S Domain Group compared with the High YSQ-S Domain Group

	Total Maladaptive Schema Scores for all four Early Childhood Memories																	
	ED	MA	AB	SI	DS	DI	VH	EM	FA	ET	IS	SJ	SS	AS	NEG	EI	US	PUN
Schema Domain	1	1	1	1	1	2	2	2	2	3	3	4	4	4	5	5	5	5
Low YSQ-S Group	111	40	93	13	41	67	88	35	16	33	30	8	36	10	18	0	13	4
High YSQ-S Group	172	109	160	65	68	75	104	27	24	33	44	63	24	26	20	25	24	26
Proportional Difference	1.5	2.7	1.7	5.0	1.7	1.1	1.2	1.3	1.5	1.0	1.5	7.9	1.5	2.6	1.1	O	1.9	6.0

N = 104. *Note*: Schema Domain 1 = Disconnection & Rejection, Ed = Emotional Deprivation, MA = Mistrust/Abuse, AB = Abandonment, SI = Social Isolation, DS = Defectiveness/ Shame; Schema Domain 2 = Impaired Autonomy & Performance, DI = Dependence/Incompetence, VH = Vulnerability to Harm, Em = Enmeshment, FA = Failure; Domain 3 = Impaired Limits = ET = Entitlement, IS= Insufficient Self-Control; Domain 4 = Other-Directedness, SJ = Subjugation, SS = Self-Sacrifice, AS = Approval-Seeking; Domain 5 = Overvigilance & Inhibition, NEG = Negativity/ Vulnerability to Error, EI = Emotional Inhibition, US = Unrelenting Standards, PUN = Punitiveness

In analysing the data in Table 3.6, it appears that with the exception of EM,

ET and SS, there are consistently more maladaptive schemas represented in the

memories of the people with high levels of self-reported maladaptive schemas than

people with lower levels. This is most apparent in the 'Disconnection and Rejection'

domain. In this domain, an examination of the proportional differences reveals that

Social Isolation is represented five times more in the high group as in the low group

and Mistrust/Abuse is found two and a half times as much. Subjugation has the highest individual difference as it is represented almost eight times as much in the high group when compared with the low group.

These clear differences between the two groups suggest that people with high levels of unconscious maladaptive schemas represented in their memories have accompanying high levels of self-reported psychological dysfunction and people with lower levels of unconscious maladaptive schemas represented in their memories have accompanying lower levels of self-reported psychological dysfunction. These differences were most pronounced in the schemas from 'Disconnection and Rejection' domain and the Subjugation schemas. Further analysis of these differences is investigated in the next section.

3.2.5 *Part 5: Addressing the Research Questions for Study 1 using Discriminant Function Analysis*

Discriminant Function Analysis (DFA) was used as the main analyses to address the research questions for Study 1 and 2. In brief, the question for Study 1 asked whether unconscious maladaptive schemas and object relations that are represented in early childhood memories are able to distinguish between people that self-reported currently experiencing high levels of maladaptive schemas from people who self-reported currently experiencing lower levels. The second question asked to identify these schemas. The following section outlines the rationale for selecting DFA as the statistical method to address the present research questions.

3.2.5.1 Rationale for the use of Discriminant Function Analysis.

In relation to the present research questions, Discriminant Function analysis (DFA) has the advantage of being able to calculate whether the maladaptive schemas and object relations themes represented in the early childhood memories can predict membership of groups with different levels of self-reported maladaptive schemas. Thus, DFA is appropriate for exploratory and explanatory purposes to understand differences between groups (Betz, 1987), and is also recommend for predictive purposes (Tabachnick & Fidel, 1996).

DFA has the advantage over separate F-tests, such as a number of independent T-tests, because experiment-wise error is avoided (Betz, 1987). Additionally, the statistical goal of correctly classifying people to particular groups using DFA requires fewer statistical demands than inference testing (Tabachnick & Fidell, 1996). For example, achieving high accuracy in the allocation of people to groups tends to override considerations such as the shape of distributions. In this regard, Tabachnick and Fidell (1996) suggest that DFA is robust to failures of normality for violations caused by skewness, as long as the group sizes are fairly equal. Therefore, as far as possible, group sizes were kept to a similar size.

As DFA is sensitive to outliers, testing was conducted for univariate and multivariate outliers using Mahalanobis distances and any cases that were deemed outliers (from Chi square table) were removed (three cases were omitted from further analyses). DFA is similar to multiple regression whereby prediction is calculated from a set of continuous predictor variables. DFA partials out inter-correlations

between independent variables and extracts the minimum number of predictor variables. In this case, in Study 1, schemas represented in early memories form a dimension or profile that helps to explain and predict group differences (Betz, 1987). For example, a DFA was used to predict membership to the low, medium or high YSQ-S group. In this way, DFA can hypothetically identify people that might be at some sort of psychological risk (High maladaptive schema score group) and for whom particular therapeutic interventions might be advisable.

The relationships among early childhood memory data and self-reported maladaptive schemas from YSQ-S (Young, 1998) were primarily analysed via a stepwise multivariate discriminant function analysis. First, Young's (1990) maladaptive schemas (Young, 1999) represented in the early childhood memories were entered as predictor variables. Further analyses entered Last and Bruhn's (1992) Object Relations categories as predictors. The Stepwise method (minimising Wilk's lambda) of analysing the predictor variables avoids the problem of multi-collinearity and singularity by a tolerance test at each step (Tabachnick & Fidell, 1996) and this method (stepwise) was initially used to select the predictor variables. Sometimes predictors were added using the 'Enter' method if there was a significant difference in the groups' predictor variables and if the inclusion of a predictor increased the accuracy of predicting group membership.

Betz (1987) suggests using cross-validation with DFA in cases where the researcher wants to apply the function to the prediction of group membership in subsequent samples of people. The cross validation thus enables a broader

interpretation of the results rather than expressly for the sample in which the function was originally developed. Therefore, for this study, the 'leaving- one-out method' of cross validation was used. Each case in the analysis is classified by the functions derived from all cases other than that case. Betz believes this method is essential so as not to overestimate the accuracy of classification. This conservative type of analysis is also known as the 'U-method' (SPSS Version 11). It is important to note that in observing the percentage of correct allocations to either the low, medium or high group from the predictor variables, that correct allocation to the high group has more utility in terms of identifying people at risk than the middle group. In other words, it is considered more important to have people correctly allocated to the high group, which represents in this case, a higher level of current self-reported maladaptive schemas, than correctly allocating people to the middle group that is reporting an average level of current dysfunctional schemas. However, the correct allocation of people to the low group that has relatively low levels of self-reported maladaptive schemas is also important with concurrently predicting allocation to the high group as the low group provides a comparison to the high group.

As there are no norms presently available for the YSQ-S (1998), the groups (Low, Medium & High) were identified for the first DFA by dividing the whole sample into three groups of approximately equal size. This meant that the Low Group included people with self-reported maladaptive schemas total domain T–scores from the lowest score (T-score = 31.5) to 54.65. People in the Medium Group had T-scores from 54.84 to 64.65 and people in the High Group had T-scores from 64.75 to

106.25. Each group contained about 70 people. This meant that people in the High group had self-reported maladaptive schema scores that were at least one standard deviation above the mean, and were therefore considered to have above average maladaptive schema scores, when compared with the Low group that had scores ranging from around the mean to two standard deviations below the mean. As there were no significant differences found between men and women on the YSQ-S total schemas scores (Young, 1998) or the Early Memory themes (see Section 3.2.1 - Part 1), and the much smaller sample size of men compared to women, separate DFAs looking at differences between men and women were not performed.

3.2.6   Results for Discriminant Function Analyses

Domains were calculated by summing the scores from each maladaptive schema that related to that domain. In all, the five Domains from the four memories were each entered as predictors along with the Object Relations measures using the stepwise method. Domains were used in the first analysis rather than individual maladaptive schemas scores as it was often found that individuals had a number of maladaptive schemas in their early childhood memories that were related to a particular domain. The results for the first DFA analysis can be seen in Table 3.7.

For the DFA shown in Table 3.7, there was one significant Discriminant Function with a Wilks' Lambda of .88, $\chi2(4, N = 209) = 26.15$, $p< .0001$ and an Eigenvalue of .13. The Canonical Correlation was .34. The functions at Group Centroids were Low YSQ-S Group = -.37, Medium YSQ-S Group = -.12 and the High YSQ-S Group = .49.

Table 3.7

DFA Predictors from the Early Childhood Memories and Standardised Canonical

Discriminant Function Coefficients for YSQ-S Groups

Early Memory Predictors	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Group Classifications for Low, Medium and High YSQ-S Domain Score Groups
		Low YSQ-S Group 61% *(n = 72)*
EM 2 Disconnection and Rejection Domain	.79	
		Med YSQ-S Group 13% *(n = 67)*
EM Father Object Relations Perceptions of the Environment (Unsafe)	-.55	
		High YSQ-S Group 56% (*n =*70)

N = 209; *Note*: Med = medium

　　Young's (1999) 'Disconnection and Rejection' domain from the Second Early

Childhood Memory and Last and Bruhn's (1992) object relations category of

'Perceptions of the Environment' as unsafe from Early Memory of Father were found

to be significant predictors that could differentiate the groups. Sixty-one percent of

people in the Low group were correctly classified which was better than the chance

rate of 33 percent. Thirteen percent of the Middle group were correctly classified

which was no better than chance. However, 56 percent of people were correctly

allocated to the High group, which is better than the chance rate (33 percent).

As a comparison analysis, individual maladaptive schemas (rather than domains) represented in the memories were entered as predictor variables using the stepwise method in the DFA in Table 3.8. A second analysis using individual schemas rather than composite domains tests the reliability of the first DFA results and also extracts the most important maladaptive schemas from the domain that predicts group differences. The results are presented in Table 3.8

Table   3.8

DFA Predictors from the Early Childhood Memories and Standardised Canonical Discriminant Function Coefficients for YSQ-S Groups

Early Memory Predictors	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Group Classifications for Low, Medium and High YSQ-S Score Groups
Em2 Social Isolation	**.69**	Low YSQ-S Group 82% *(n = 72)*
Em1 Mistrust Abuse	**.40**	
		Med YSQ-S Group 3% *(n = 67)*
EM Father Object Relations Perceptions of the Environment (negative loading = as unsafe)	**-.55**	High YSQ-S Group 51% (*n* =70)

N = 209; *Note*: Med = medium

The maladaptive schemas (Young, 1990) of Social Isolation from the second early memory and Mistrust/Abuse from the first early memory along with Perceiving the Environment as unsafe (Last & Bruhn, 1992) were found to be significant predictors that could differentiate the groups. There was one significant Discriminant

Function with a Wilks' Lambda of .87, $\chi2(6, N = 209) = 29.20$, $p< .0001$ and an

Eigenvalue of .15. The Canonical Correlation was .36. The functions at Group

Centroids were Low YSQ-S Group = -.40, Medium YSQ-S Group = -.11 and the

High YSQ-S Group = .51. Eighty-two percent of people in the Low group were

correctly classified, which was better than the chance rate of 33 percent. Three

percent of the Middle group were correctly classified which was no better than

chance. However, 51 percent of people were correctly allocated to the High group,

which is better than the chance rate (33 percent).

This result further highlights the ability of maladaptive schemas from the

'Disconnection and Rejection' domain to identify people in the group with high

levels of self-reported maladaptive schemas. This second analysis using individual

maladaptive schemas as predictors replicated the findings of the first DFA by

extracting maladaptive schemas that are a part of the 'Disconnection and Rejection'

domain. However, in the case of the Mistrust/Abuse schema, it comes from the same

domain, but a different memory than in the first analysis. This suggests that it is a

strong predictor because the same schema emerged from different memories.

As the research questions focus on whether maladaptive schemas represented

in memories can distinguish people currently experiencing high levels of self-

reported maladaptive schemas from people with lower levels, further DFAs were

performed to investigate these specific questions in more detail. The failure of

previous DFAs to find predictors that identified the middle group, was thought to be

because this group consisted of a mixture of people with aspects of both the high and

low groups. Therefore, in the proceeding DFAs, this group was discarded so as to ascertain whether people who were clearly experiencing high levels of self-reported maladaptive schemas could be differentiated from a comparison group that was experiencing low levels.

Groups were formed based on people's T-scores. The High Group comprised people with T-scores greater than one standard deviation above the mean (considered to be closer to a clinical group [Derogatis, 1993]) and a comparison group (low) that had scores lower than one standard deviation below the mean (Hence, the different sample sizes to those shown on Table 3.7 and 3.8). Three exploratory DFAs were performed. In the first DFA, the predictors that were entered using the stepwise method were Young's (1990) maladaptive schemas coded in the early childhood memories. In the second DFA, Last and Bruhn's (1992) Object Relations variables were entered as predictors. A final DFA explored combining the significant predictors (Young's and Last & Bruhn's) from both DFAs into one analysis. The results for all three analyses are displayed in Table 3.9.

The Eigenvalue for the first DFA in Table 3.9 that used Young's (1990) maladaptive schemas as predictors was .41 and the Canonical Correlation was .54. There was a significant Discriminant Function with a Wilks' Lambda of .71, $\chi2(4) =$ 26.18, $p < .0001$ and the functions at Group Centroids were Low YSQ-S Group = -.62 and the High YSQ-S Group = .64. Overall 77.8% of cross-validated grouped cases were correctly classified.

Table 3.9

DFA Predictors from Early Childhood Memories and Standardised Canonical

Discriminant Function Coefficients for YSQ-S Low and High Groups

Early Memory Predictor Variables	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Group Classifications for Low and High YSQ-S Groups
First analysis DFA using Young's schemas		
		Low YSQ-S Group 85% *(n= 41)*
EM 1: Mistrust/Abuse	**.59**	
EM Mother: Emotional Deprivation	**.55**	
EM 2: Social Isolation/Alienation	**.53**	
EM 2: Subjugation	**.48**	High YSQ-S Group 70% *(n = 40)*
Second analysis DFA using Last & Bruhn's Object relations		
		Low YSQ-S Group 51% *(n = 41)*
EM 2 Perceptions of the Environment as Unsafe	**1.00**	High YSQ-S Group 70% *(n = 40)*

N = 249. Note: 168 cases were ungrouped [middle group]

As shown in Table 3.9, for the first DFA using Young's maladaptive schemas

as predictors, high levels of Mistrust/Abuse from the first early memory, Emotional

Deprivation from the early memory of Mother, and Social Isolation and Subjugation

from the second early childhood memory were the variables that best predicted group

membership for people in the High YSQ-S group. The correct allocation was much

better than chance with 70 percent of people in the High group being correctly

allocated by four of Young's (1999) maladaptive schemas represented in the early

memories. Low levels of these predictors predicted the Low YSQ-S group much better than chance (85%).

The second DFA in Table 3.9 used Last and Bruhn's (1992) object relations from all four memories as predictors. High levels of 'Perceiving the Environment' to be unsafe was the only significant object relations predictor. It predicted 70 percent of the people who were originally classified in the High YSQ-S group. However, low levels of this predictor did no better than chance (51%) in predicting people in the group with low levels on the YSQ-S. The Eigenvalue was .09 and the Canonical Correlation was .29. There was a significant Discriminant Function with a Wilks' Lambda of .92, $\chi2(1) = 6.69$, $p = .01$ and the functions at Group Centroids were Low YSQ-S Group = .29 and the High YSQ-S Group = -.30.

In the third DFA, which combined the significant predictors from the both these analyses, it was revealed that 'Perceiving the Environment' as unsafe did not emerge as a significant predictor. Nevertheless, Young's (1990) maladaptive schemas of Mistrust/Abuse, Emotional Deprivation, Social Isolation and Subjugation were significant predictors in this analysis. Given that this result revealed the same predictors as in the first analysis they are not included in Table 3.9.

To further illustrate the link between the maladaptive schemas in early memories and high levels of self-reported maladaptive schemas, some examples of early memories have been extracted from Study 1. These cases were chosen from the list of people who were correctly identified with high levels of self-reported maladaptive schemas.

3.2.7   Part 6: Qualitative Examples of Maladaptive Schemas in the Early Childhood Memories for People with High Levels of Self-Reported Maladaptive Schemas

The following memories exemplify the maladaptive schemas found to be the best indicators of people who were in the group that had high levels of self-reported maladaptive schemas. Recall that the predictor variables were maladaptive schemas from the 'Disconnection and Rejection' domain that included, Emotional Deprivation, Abandonment, Mistrust/Abuse, Social Isolation and Defective/Shame and the Object Relations category, 'Perceiving the Environment' to be unsafe.

The participants were able to clarify important aspects of their memories that were not always obvious to the reader (or coder) by answering 'What was the clearest part of the memory?'; 'What was the strongest feeling in the memory?'; 'What thought or action is this connected with?' and, 'If you could change the memory in any way what would that be?' Answers to these questions are included in the following extracts if it was deemed that they clarified aspects of the memory that were not as clear otherwise. Any identifying features have been removed from the following case studies to protect people's anonymity and to ensure confidentiality.

The following examples include maladaptive schemas from the Disconnection and Rejection domain. The first memory is from a man aged 26 years and illustrates among others the maladaptive schemas of Abandonment and Mistrust.

> 'When my mother took me shopping when I would have been 4 or 5years old and for some reason or other I lost my mother in the crowd. I started to panic and was in tears and hysterical almost instantaneously until some other woman came up to me and asked me where my mother was and walked

around with me for a bit. I remember being much calmer that someone was looking after me even though I still had not found my mother. Eventually found her and was initially angry at her for losing me.'

The clearest part of memory: 'The complete despair of being lost.' and the *strongest feeling* 'panic and abandonment.' *If I could change the memory it would be* 'that it did not happen.' This person's current self-reported maladaptive schema total T-score was 67. The highest self-reported current schemas scores were for Subjugation [25/30], Mistrust/Abuse [23/30] and Social Isolation [22/30], and Defectiveness/Shame [19/30]. The memory, clearly illustrates this person's feelings of abandonment by his mother. He is not sure why he lost his mother but he acknowledges his anger towards her when they are reunited. He then recalls being comforted by the stranger. Given that this man's highest self-reported rating was for Subjugation, which involves perceptions that one's own desires, feelings or opinions are not important to others, it is possible that underlying the perception of being subjugated by others is a vulnerability towards being abandoned by them and thus possibly a feeling of giving in to others so as not to be abandoned. People with Subjugation schemas also tend to surrender control to others, which can eventually lead to them having angry outbursts.

The memory may also indicate that this person is angry because he feels as though people close to him may leave him unexpectedly and that he cannot cope on his own. Mistrust is also involved here. His unconscious feelings of abandonment and mistrust of his mother, may underpin his current self-reports. The memory may also

reveal the heart of the matter for this person and these aspects can be explored in therapy.

The next example is of the predictor variable Social Isolation /Alienation from the Second early childhood memory of a woman who was 27 years of age.

'I was at kinder and a new girl came to her first day there. She fitted in straight away. **I didn't like her so I stuck out my tongue at her**. **She did the same back to me and then some other kids stuck their tongues out at me as well'.**

The *strongest feelings* in the memory were of being **'teased, isolated, and not fitting in'.** The *thought or action associated with the memory* was '**abandonment'**. The memory was rated as having high levels of Social isolation/Alienation and moderate levels of Abandonment. There were also elements of Mistrust Abuse. (This person's first early memory also had feelings of Abandonment and of being threatened). This memory represents feeling threatened by the new girl and then being socially isolated (victimised) by the other kinder children who tended to side with the new girl. There are also elements of feeling defective or shame when judged by her peers. The memory opens up many possibilities for discussion with this person. This respondent was from the High YSQ-S group. The highest self-reported ratings were for Self-sacrifice [28/30] and Unrelenting Standards [28/30]. In this case the memory offers a deeper understanding in comparison with the self-reported information, of issues that may be related to her self-sacrificing feelings and her striving towards high standards. She may be compensating for her fear of being abandoned and socially isolated by creating high standards and sacrificing her own needs for those of others. By achieving high standards and putting other people's

needs before her own she may keep people "loving" her so that her fear of feeling defective and being isolated are not brought to the surface of her thinking.

The following early childhood memory is an example of the predictor variable Emotional Deprivation from Early childhood memory of Mother from a woman who was 30 years of age.

> 'My Mum was at the hotel and my brother and I were cold and wanted to get into our apartment. **I told** my brother to go in the hotel and ask mother for the front-door key. He was probably 6 years old and I was 9 years old and **he did as I asked him.** He came out and **we were happy** and went home. Then afterwards I remember my mother getting the rubber out of the flyscreens that were left over from the housing commission installing fly-screens and **she whipped the back of my legs with it**. **She said we were not allowed into the hotel and that I embarrassed her'**.

The *clearest part of the memory* was '**being scared of sending my brother into the hotel**'. The *strongest feeling* was '**of fear'**. The *thought or action connected with the memory* was '**getting into trouble for sending my brother into the hotel'.** *If I was to change the memory* '**it would be that my mother was not drunk'.** The memory was rated as having extremely strong levels of Emotional Deprivation, Mistrust Abuse, and Abandonment. The environment is also perceived as being unsafe. This person had a high YSQ-T-score of 68. The highest self-reported maladaptive schemas scores were for Unrelenting Standards [30/30], Abandonment [30/30]; Self-Sacrifice [25/30], and Emotional Deprivation [25/30]. The memory outlines the fear and abuse this child experienced from a young age and as in the previous example may explain the high levels of Self-Sacrifice and Unrelenting Standards. The fear and abuse seem to be the main areas to be explored further. There are also perceptions of not having her needs met and of being abandoned.

The following example is from early memory of Father and illustrated the 'Perception of the Environment' as unsafe. This memory is from a man who is 30 years old.

"My father criticising me for not coming first in a race"

The clearest part of the memory is 'The look on his face'. The strongest feeling is quite strong 'fear'. There was a feeling of fear because of the consequences stemming from the father of not coming first in the race. This early memory is also an example of an extremely brief recollection but it has plenty to investigate in terms of this man's expectations of other people and feeling unsafe when those external expectations are not met. The man's self-reported YSQ-S T-Score is 67 and the highest scores were for Unrelenting Standards [27/30], Mistrust [24/30] and Abandonment [23/30].

The memory indicates that the person's high expectations of himself [Unrelenting Standards] may stem from feelings surrounding his father or male figures in his life not unconditionally accepting him. There is fear associated with being rebuked for not achieving what other people expect of him. The environment is perceived as unsafe because of the consequences of unrealistic expectations that he feels he has to put up with from others such as his father. These conditional expectations may have had a lasting influence on his life. Examining this memory may encourage this man to express his fears and perceptions of the pressures other people may place upon him.

3.3 Summary of Results for Study 1

The results indicate that there are links between maladaptive schemas in the memories and self-reported maladaptive schemas. These relationships were initially revealed in the significant correlations using the entire sample which were as high as $r = .50$. They suggest that as the levels of maladaptive schemas in the memories increase, there is a concurrent increase in the level of current self-reported maladaptive schemas. There were also relationships with object relations themes in the memories and self-reported maladaptive schemas. Generally, as the level of dysfunctional object relations themes increased in the memories there was a concurrent increase in the level of current self-reported maladaptive schemas.

Within the correlations, the most represented maladaptive schemas in all four memories were from the 'Disconnection and Rejection' domain. However, the First and Second memories showed a different pattern of relationships when compared with the memories of Mother and Father. The first two memories revealed that Social Isolation and Mistrust/Abuse were the most represented. In the Mother and Father memories Defectiveness/Shame was the most represented. This suggests that the spontaneous memories (First and Second) were revealing different information than the directed Mother and Father memories. It was also found that the maladaptive schemas represented in the memories were mostly related to different self-reported maladaptive schemas, which suggests that the early memories were drawing on different unconscious issues than was being revealed from the conscious self-reported information.

Clear trends were seen (Figure 3.1) when comparisons were made among groups with different levels of self-reported schemas and their corresponding schemas represented in memories. For example, when comparing the total sample's domain scores that were found in all four memories and their corresponding self-reported maladaptive schemas scores, the presence of maladaptive schema themes from the 'Disconnection and Rejection' domain increased progressively as the self-reported maladaptive schemas increased. Further analysis of the group that self-reported the highest levels of maladaptive schemas with a comparison group that had reported lowest levels revealed that there was a markedly greater proportion of maladaptive schemas represented in the memories of people that had self-reported high levels than in the low group. The schemas most represented were Social Isolation and Mistrust/Abuse from the 'Disconnection and Rejection' domain when compared with the other domains. The greatest individual proportional difference was found with the Subjugation schema. People in the high group had eight times more representations of this schema in the memories than was found in the low group.

An investigation of the research questions using DFAs to ascertain whether particular maladaptive schemas and object relations represented in the early memories could distinguish between people with high levels of self-reported maladaptive schemas from those with fewer maladaptive schemas confirmed the influence of maladaptive schemas from the 'Disconnection and Rejection' domain. The DFAs also revealed the 'Perception of the Environment' as unsafe was another predictor of people with high levels of self-reported maladaptive schemas.

In relation to the first research questions, when the whole sample was divided into three equal groups of differing levels of maladaptive schemas (low, medium and high), the results from the first DFA found that the Disconnection and Rejection domain (EM2) and Perceiving the Environment as unsafe (EM Father) predicted group membership of the low and high groups at a greater level than chance. In contrast, the middle group was not predicted at a greater rate than chance. This might be due to the middle group being a mixture of people with either low or high maladaptive schemas scores and therefore was considered undifferentiated. Alternatively, the predictors related more directly to people with high levels of maladaptive schemas rather than self-reported medium levels.

Subsequent DFAs that entered individual maladaptive schemas and object relations as predictor variables to test the results of the first DFA, revealed that Mistrust/Abuse (EM 1); Social Isolation and Perceiving the Environment as unsafe (EM Father) were significant predictors of people with high levels of self-reported maladaptive schemas and differentiated them from people with low levels.

The individual early childhood memories that followed on from the DFAs epitomize the simplicity and also the wealth of information that stems from these narratives. The individual memories have an advantage over quantitative data in that they focus on individual dynamics rather than impersonal group data. There are clear issues, relationship dynamics (object relations), and maladaptive schemas that reveal themselves from the early childhood memories that are not often accounted for in quantitative analyses.

This chapter has focused on the relationships among maladaptive schemas (unconscious) represented in early childhood memories and self-reported maladaptive schemas (conscious). Chapter 4 examines the relationships among maladaptive schemas (unconscious) represented in early childhood memories and self-reported psychological symptoms.

CHAPTER 4   STUDY 2

MALADAPTIVE SCHEMAS REPRESENTED IN EARLY CHILDHOOD MEMORIES AND THEIR RELATIONSHIP TO CURRENT SELF-REPORTED PSYCHOLOGICAL SYMPTOMS

This chapter describes the research aims, method and the results for Study 2. The purpose of Study 2 was to extend on Study 1 by investigating the relationships between the maladaptive schemas represented in early childhood memories and current self-reported psychological symptoms.

4.1.1   *Research aims*

The research aims for Study 2 were to further investigate the contention put forward by the research questions:

(1) Are unconscious maladaptive schemas, object relations and affect that are represented in early childhood memories able to distinguish between people who reported currently experiencing high levels of psychological symptoms from people who reported experiencing lower levels?

(2) Which unconscious maladaptive schemas, object relations and affect represented in early childhood memories best identified people who reported currently experiencing high levels of psychological symptoms?

In particular, representations of Young's (1999) maladaptive schemas, Last and Bruhn's (1992) Object relations variables and Hermans and Hermans-Jansen's (1995) affect terms related to the early childhood memories were used to identify (predict) people with different levels of self-reported psychological symptoms as indicated by the Brief Symptom Inventory (BSI; Derogatis, 1993).

4.1.2 Participants

The sample in Study 2 comprised 278 participants. There were 65 men ranging in age from 18 years to 54 years of age (mean age = 21·94 years; SD = 7·78 years) and 206 women that ranged from 18 years to 49 years of age (mean age = 21·59 years; SD = 7·10 years). Two men and five women did not state their age. The participants were all first year undergraduate psychology students from two campuses at Swinburne University of Technology. They participated as part of their course requirements.

4.1.3 Description of the measures

The sample in Study 2 completed a package of self-report questionnaires. These included an information sheet (Appendix B 1) followed by four Early Childhood Memories-two spontaneous and one of Mother and one of Father. The participants also self-rated their Early Childhood Memories from a list of affect terms that related to the memories (Appendix B 2). They then completed the Brief Symptom Inventory (BSI; Derogatis, 1993) [Appendix 3]. The next section provides a description of the measures included in the questionnaire package.

4.1.4   Autobiographical Memories

For Study 2, the participants completed the same set of four early

memories used in Study 1 with the same instructions. They were directed to

complete two spontaneous early childhood memories that came to mind and two

probed memories, which included one memory of mother and one of father. The

specific memories of Mother and Father were chosen for the same reason as

outlined for Study 1, as these directed memories reveal aspects of the person's

relationships with their primary caregiver/s (object relations), and relationships

with women and men generally. These patterns of relationship are also reflected

in current relationships and can affect health and behaviour (Bruhn, 1990a).

The respondents were instructed to include as much detail as possible in

their recollections including how the memory began and ended. They were also

requested to leave out instances that someone told them about. The instructions

outlined that the first two Early Childhood Memories needed to be of a specific

happening or event from childhood. It began "I remember one time…. The third

early memory asked about the first memory of Mother and the fourth about the

first memory of Father. The full version of instructions for the early childhood

memories is found in the Appendix (B 2).

After each early recollection participants were asked, "What was the

clearest part of the memory?"; and "The strongest feeling in the memory?". The

respondents were also asked to rate the intensity of the feeling, from 0 = "not

strong at all" to 4 = "extremely strong". This question was followed by, "What

thought or action is this connected with?" and "If you could change the memory

in any way, what would that be?" Finally, the participants were asked to respond

to "How important is the memory?" and "How intense is the memory". The last two questions were rated from 0 = "not strong at all" to 4 = "extremely strong".

4.1.5   Affect Terms (Hermans & Hermans-Jansen, 1995)

In addition to the instructions given in Study 1, the participants in Study 2 were required to self-rate the affect present in their own Early Childhood Memories using a comprehensive list of 24 affect terms that were placed directly after each memory. The affect terms embody four domains compiled by Hermans and Hermans-Jansen (1995). Hermans and Hermans-Jansen have used these affect terms in their clinical, counselling and therapeutic work to reveal the phenomenological aspects of motives and affect. The respondents also rated these affects on a rating scale that ranged from 0 = "not at all" to 4 = "extremely". A full version of the affect terms and rating scales are presented in Appendix (B 2).

4.1.6   Hermans and Hermans-Jansen (1995) Affect Domains

Hermans and Hermans-Jansen's (1995) affect terms were incorporated into Study 2 to expand on Last and Bruhn's (1992) affect category in the CEMSS-R manual. According to Epstein and Pacini (1999), affect is a major influence in the experiential system and Hermans and Hermans-Jansen's affect domains were self-rated for intensity by the respondents. This self-rating was also a check for the level of intensity that is not always obvious from a memory. The 24 affect terms were placed after each of the four Early Childhood Memories. The respondent rated each word (if it applied) in relation to each memory. Each word was rated on a five point scale that ranged from 0= 'not at all' to 4 = 'Extremely'.

The four affect domains include Negative Affect, Positive Affect, Self-enhancement and Need for Closeness. These affect terms include words that may describe these aspects and are detailed below.

Negative Affect (NA) also contains eight words – Powerlessness; Anxiety; Shame; Self-alienation; Guilt; Loneliness; Inferiority and Anger. The range of possible scores for Negative Affect are 0 to 32.

Positive Affect (PA) contains eight words – Joy; Satisfaction; Enjoyment; Trust; Safety; Energy; Inner-calm and Freedom. The range of possible scores for Positive Affect are 0 to 32.

Self-Enhancement (S) is related to striving for – Self-esteem; Strength; Self-confidence and Pride and includes these four words. The range of possible scores for the Self-Enhancement subscale are 0 to 16.

Need for Closeness (O) is associated with a longing for contact and union with the other and contains four words – Care; Love; Tenderness and Intimacy. The range of possible scores for the Contact with Others subscale are 0 to 16.

4.1.7   *Coding and Inter-Rater Reliabilities for the Early Memories*

The coding, rating process and protocols of the early childhood memories by two independent raters for Study 2 were the same as in Study 1. The four Early Memories were rated for Young's (1990) Maladaptive Schemas by one rater and Last and Bruhn's (1992) Object Relations categories that were used in Study 1 by the other rater.

A quarter of the memories from Study 2 were randomly selected and a second independent rater who was trained by the researcher, recoded and rated the selection of memories. Cohen's Kappa (k; Cohen, 1960) was used to assess inter–

rater reliability (correcting for by-chance agreement) for each rating that was used to code the early childhood memories. Reliability was acceptable for all coding categories (all p's<.01). Cohen's Kappa ranged from .71 to .95 with a mean rating of .84. Any discrepancies that the second rater had with the first rater were discussed until an agreement was reached. The agreed ratings were then used for all analyses. The full version of the early childhood memory procedure, coding and rating scales are presented in Appendix (B 2).

4.1.8 Brief Symptom Inventory (BSI; Derogatis, 1993)

The Brief Symptom Inventory (Derogatis, 1983) is a self-report inventory that measures nine symptom dimensions with 53 items. It is the shorter form of the long (93 items) Symptoms Check List-Revised (SCL-90-R; Derogatis & Cleary, 1977). The BSI reveals a general level of psychological wellbeing. There are nine subscales comprising Somatisation, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism. Each item is measured on a five-point scale of distress that ranges from 0 = 'not at all' to 4 = 'extremely'. Higher scores indicate more of the symptom dimension. A full version of the BSI is found in Appendix (B 3).

4.1.8.1 BSI Subscales

Somatization Dimension (SOM). This subscale has seven items that relate to distress derived from perceptions of bodily dysfunction. Items focus on distress associated with the cardiovascular, respiratory, gastrointestinal and the gross musculature systems, as well as somatic equivalents of anxiety.

Obsessive-Compulsive Dimension (O-C). This dimension contains six items and is related to symptoms that focus on thoughts, impulses and behaviours

that are experienced as incessant and unable to be ignored by the individual. These symptoms are also deemed unwanted by the individual.

Interpersonal Sensitivity Dimension (I-S). The four items from this dimension relate to feelings of personal inadequacy and inferiority, especially when evaluating oneself against others. Feeling uncomfortable when engaged in interpersonal interactions, self-depreciation and self-doubt are all related to this syndrome.

Depression Dimension (DEP). This dimension comprises a range of indictors of clinical depression such as dysphoric mood and affect. These aspects are represented by six items that measure a lack of motivation and a lack of interest in life.

Anxiety Dimension (ANX). This subscale has six items that relate to general signs of nervousness and tension. Panic attacks and feelings of terror are also included in this dimension. Items in this dimension measure feelings of apprehension (Cognitive component) and some somatic aspects related to anxiety.

Hostility Dimension (HOS). The five items in this subscale pertain to thoughts, feelings or actions that relate to the negative affect state of anger.

Phobic Anxiety Dimension (PHOB). This dimension has five items related to a persistent fear response – to a person, object, place or situation. This fear is deemed to be irrational or exaggerated when compared with the stimulus. This dimension is similar to the notion of agoraphobia. The person's behaviour is often avoidant or escapist and can be disruptive.

Paranoid Ideation Dimension (PAR). This subscale includes five items related to a disordered mode of thinking. Characteristics include projective thought, suspiciousness, hostility, fear of loss of autonomy and delusions.

Psychoticism Dimension (PSY). This subscale contains five items and was constructed to represent a graduated continuum from mild interpersonal alienation to psychosis. Items relate to a withdrawn, isolated or schizoid lifestyle along with symptoms of schizophrenia.

Additional Items. There are also four additional items that contribute to the global scores on the BSI. These items do not form a dimension but rather are used as clinical indicators.

4.1.8.2 Calculating the Three Global Indices of the BSI

Raw scores are calculated by summing the values for each item the respondent has endorsed in each subscale dimension, as well as the four additional items. A score for each dimension is calculated by summing the values for each item in the dimension and then dividing this total by the number of items that were endorsed.

To calculate a Global Severity Index (GSI) all nine symptom dimensions are summed along with the additional items. The Positive Symptom Total (PST) is calculated by totalling the number of items endorsed with a non-zero response and the Positive Symptom Distress Index (PSDI) is derived by dividing the sum of the item values by the PST. The raw scores for the three global indices and the nine symptom dimensions can then be converted to standardised T scores. Scores for Normative groups are provided in the BSI manual (Derogatis, 1993).

4.1.9   Psychometric properties of the BSI (Derogatis, 1993)

Alpha coefficients for all nine dimensions were reported by Derogatis (1993) using a sample of 719 psychiatric outpatients. The coefficients ranged from a low of ·71 on the Psychoticism subscale to a high of ·85 on the Depression subscale. Derogatis also reported test-retest reliabilities that ranged from a low of .68 for Somatization, to a high of .91 for Phobic Anxiety, using a sample of 60 non-patient individuals across a two-week period. The BSI has also shown good convergent validity with other scales of psychopathology such as the Minnesota Multiphasic Personality Inventory (Boulet & Boss, 1991; Derogatis, 1993).

Derogatis (1993) recommended that for a respondent to be considered 'a case', he or she would have a T-score greater than 63 on any dimension which accurately place an individual in the 84th percentile of the normative population. For the present study, BSI scores were transformed to T–scores and people with scores greater than or equal to 60 were considered to be in the high group. People with BSI scores lower than 43 were considered to be in the low group except for people in the low Phobic group where the T-score cut-off was raised to 45 or less because of a lack of people with low scores.

The BSI has been used with a number of clinical and non-clinical samples and is considered to be an efficient measure of distress (Groth-Marnat, 1997; Piersma, Boes & Reaume, 1994). Hayes (1997) indicated that it is an ideal instrument to use when assessing university students as it is easy to administer and on average takes only 10 minutes to complete. However, Derogatis (1993) has not published norms for all age groups. Notably, there are no published norms for university students around 20 years of age that were used in the present study.

Some studies (e.g., Cochran & Hale, 1985) reported that student scores were higher on all the BSI subscales when compared with non-clinical samples published by Derogatis and Spencer (1982). For example, Cochran and Hale investigated health and wellbeing in a college student population with a mean of 20 years of age. They administered the BSI to 347 students and found that the students' scores were higher on all the BSI subscales than non-clinical samples. Hayes (1997) also found BSI scores to be higher for students in this age group than the published adult non-clinical norms of Derogatis (1993). This suggests that the existing norms for non-clinical adults and adolescents do not adequately reflect the norms for the university age group ($m = 20$ years), which lies between the two normative group results published by Derogatis (1993). However, in terms of identifying people with elevated levels of distress, T-scores greater than 63 should adequately capture people that are considered to be a clinical case (Groth-Marnat, 1997).

4.1.10 Procedure

An information page containing details of the study was included on the front page of the questionnaire package. Copies of the information page and the full version of the Early Childhood Memories questionnaire are presented in the Appendices B 1 and B 2 respectively).

The data was collected during student's psychology class times. A staff member read out the information from the information sheet attached as a front page and told the students that this page could be kept for their information if they wanted to tear it off. The front page outlined the name of the study and that the

participants would remain anonymous. Participation was voluntary and respondents could withdraw at any time. The participants were informed that if the material contained in the study elicited any difficult issues for them, they could contact the counselling service for assistance. The phone number of this service was provided on the information page. Contact numbers for the senior supervisor and the researcher were also provided on the information sheet. The students were then asked if there were any questions. The tutor then waited outside the tutorial room for the students to complete their questionnaire package.

The questionnaires for Study 2 took approximately 40 to 45 minutes to complete during tutorial times and a student volunteer placed the questionnaires in an envelope once the respondent indicated that they were finished. The measures were counterbalanced to control for order effects. Half the sample had the four Early Childhood Memories to complete first along with the affect terms, followed by the BSI (Derogatis, 1993) whereas the other half of the sample had the measures in the opposite order. The full version of the BSI can be seen in Appendix B 3.

4.2   Results for Study 2

This section presents the findings from Study 2 in three parts. Part 1

includes summary statistics for the themes represented in the Early Memories and

for the BSI (Derogatis, 1993). Part 2 examines relationships among maladaptive

schemas, object relations and Affect represented in the early childhood memories

and self-reported Psychological Symptoms. Polyserial correlations, boxplots and

summary statistics were calculated to investigate these links and to observe any

patterns in the data. Part 3 investigates the research questions for Study 2 using

Discriminant Function Analyses (DFAs). Following each DFA result for each

psychological symptom, case studies are given from Study 2 respondents that

exemplify the predictors from schemas represented in the early childhood

memories that were found to identify people with high levels of psychological

symptoms and differentiate them from people with lower levels. As in the results

for Study 1, N sizes vary as a function of the completeness of protocols.

4.2.1   Part 1: Summary Statistics for Early Memory Variables and the BSI Subscales

As the presentation of memories and the BSI (Derrogatis, 1993) were

counterbalanced to control for order effects, a MANOVA was performed on 244

of the questionnaires to check for significant differences between the

counterbalanced groups on the BSI and the total Early Childhood Memory scores.

No significant differences were found Wilks' $\Lambda = .99$, $F(2, 241) = .66$, $p = .517$,

which indicated that there were no order effects.

To investigate whether there were gender differences in the themes

represented in the Early Childhood Memories, One-way between-groups

MANOVAs were conducted for each of the early memories. Gender was the between groups factor and the Early Memory schemas and Object Relations represented in the memories were specified as the dependent variables.

The results for the first MANOVA indicated that there were no significant gender differences among Young's schemas represented in the First Early Memory (EM1), Wilks' $\Lambda = .92$, $F(18, 234) = 1.19$, $p = .274$ or for the Object Relations variables represented in First Early Memory (EM1), Wilks' $\Lambda = .98$, $F(5, 247) = 1.02$, $p = .409$. For the Second Early Memory (EM2), the results for the MANOVA showed that there were no significant gender differences among Young's schemas, Wilks' $\Lambda = .95$, $F(18, 227) = .69$, $p = .817$. However, the MANOVA did reveal gender differences among the Object Relations themes in EM2, Wilks' $\Lambda = .94$, $F(5, 239) = 3.31$, $p = .007$. Post Hoc tests revealed that Individuals were significantly more distinctive in Women's memories than the Men's, $F(243) = 4.84$, $p = .029$ and there was also significantly more Interpersonal Contact than in the Men's, $F(243) = 10.24$, $p = .002$.

The MANOVA performed on the Early Memory Mother, indicated that there were no significant gender differences on the Early Memory schemas represented in the memories, Wilks' $\Lambda = .91$, $F(18, 223) = 1.34$, $p = .167$. However, gender differences were again found in relation to the Object Relations themes in the memories, Wilks' $\Lambda = .91$, $F(5, 232) = 4.81$, $p < .001$. In particular, Post Hoc results indicated that Women again had significantly higher representations of Individual Distinctiveness $F(237) = 19.32$, $p < .001$ and Degree of Interpersonal Contact, $F(237) = 11.95$, $p = .001$.

Table 4.1

Means and Standard Deviations for Themes Represented in All Four Memories for Men and Women

EM Themes	EM1		EM2		EM Mother		EM Father	
	Men (*n*=63)	Women (*n*=190)	Men (*n*=60)	Women (*n*=186)	Men (*n*=57)	Women (*n*=187)	Men (*n*=53)	Women (*n*=179)
	M SD	*M SD*	*M SD*	*M SD*	*M SD*	*M SD*	*M SD*	*M SD*
ED	.40; .99	.62; 1.20	.17; .64	.51; 1.14	.47; 1.02	.42; 1.03	.30; .85	.34; .91
AB	.10; .53	.51; 1.13	.23; .81	.47; 1.13	.37; .94	.46; 1.02	.17; .64	.33; .87
MA	.43; 1.07	.51; 1.13	.52; 1.07	.54; 1.19	.23; .68	.35; .94	.21; .63	.28; .80
SI	.00; .00	.25; .85	.15; .69	.22; .79	.04; .27	.02; .22	.04; .28	.04; .42
DS	.54; 1.29	.55; 1.18	.47; 1.02	.64; 1.28	.33; .91	.34; .94	.43; 1.01	.18; .70
FA	.10; .53	.09; .51	.17; .74	.13; .65	.09; .47	.00; .00	.11; .58	.02; .18
DI	.14; .62	.31; .86	.30; .91	.23; .75	.33; .87	.24; .77	.04; .28	.12; .56
VH	.75; 1.28	.68; 1.27	.44; 1.07	.52; 1.16	.61; 1.22	.44; 1.05	.40; .99	.37; .94
EM	.03; .25	.04; .29	.00; .00	.06; .35	.12; .54	.20; .64	.04; .28	.02; .21
SUB	.11; .63	.13; .64	.12; .64	.08; .48	.00; .00	.08; .46	.06; .41	.03; .33
SS	.08; .45	.05; .32	.05; .39	.13; .56	.00; .00	.06; .35	.21; .66	.10; .45
EI	.03; .25	.04; .32	.05; .39	.05; .33	.00; .00	.02; .22	.08; .39	.02; .21
US	.00; .00	.06; .37	.03; .26	.05; .32	.00; .00	.00; .00	.06; .41	.00; .00
ET	.22; .71	.13; .50	.27; .78	.19; .59	.16; .62	.15; .50	.06; .31	.15; .55
IS	.19; .69	.09; .45	.13; .62	.15; .59	.19; .64	.14; .58	.11; .58	.06; .37
AS	.00; .00	.14; .61	.18; .70	.09; .45	.09; .47	.04; .31	.09; .49	.07; .38
NEG	.27; .87	.14; .60	.13; .60	.15; .62	.18; .66	.04; .31	.13; .56	.09; .48
PUN	.08; .45	.03; .31	.08; .46	.03; .25	.00; .00	.03; .22	.04; .28	.02; .17
PoO	2.25; .77	2.29; .61	2.22; .71	2.21; .59	2.46; .57	2.51; .54	2.51; .49	2.65; .50
PoS	2.16; .72	2.06; .64	2.20; .73	2.08; .68	2.02; .70	2.01; .77	2.04; .82	2.18; .83
PoE	2.10; .85	1.99; .80	2.10; .85	1.95; .81	2.06; .81	2.16; .82	2.16; .86	2.38; .80
ID	2.00; 1.27	2.19; .61	1.95; .64	2.15; .62	2.02; .40	2.37; .56	2.25; .52	2.44; .54
DoIC	2.02; .61	2.11; .61	1.87; .57	2.15; .62	2.07; .60	2.38; .58	2.23; .68	2.43; .64

N = 253; Note: EM = Early Memory; EM1 = First Early Memory; EM2 = Second Early Memory; EM Mother = First Early Memory of Mother; EM Father = First Early Memory of father; ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust/ Abuse, SI= Social Isolation, DS = Defectiveness/Shame, FA = Failure, DI = Dependence / Incompetence, VH = Vulnerability to Harm, EM = Enmeshment, SUB = Subjugation, SS = Self-Sacrifice, EI = Emotional Inhibition, US Unrelenting Standards, ET = Entitlement, IS = Insufficient Self-Control, AS = Approval Seeking, NEG = Negativity, PUN = Punitiveness; PoO = Perception of Others, PoS = Perception of Self, PoE = Perception of the Environment ID = Individual Distinctiveness, DoI = Degree of Interpersonal Contact; Young's schemas were coded on a 5-point scale where 0= Not at all strong to 4 = Extremely Strong; Object relations were coded on a 3-point scale e.g., 1= 'others are not present' to 3= 'others are need satisfiers'

For the MANOVA in relation to Early Memory of Father, no significant gender differences were found among the Early Memory schemas represented in the memories, Wilks' Λ =.91, $F(18, 213) = 1.19$, $p = .270$ or for the Object Relations Variables, Wilks' Λ =.96, $F(5, 223) = 1.71$, $p = .134$. The summary statistics for the Early Memory variables can be seen in Table 4.1.

A One Way Analysis of Variance (ANOVA) was then performed on the overall General Severity Index of Brief Symptom Inventory (BSI; Derogatis, 1993) to check for differences between Men's and Women's scores. Significant differences were found between Men's ($m = .77$) and Women's ($m = 1.07$) overall scores $F(1, 238) = 9.78$, $p =.02$. Women had significantly higher scores on the GSI than the men. Given that significant gender differences were found on the GSI, a Multiple Analysis of Variance (MANOVA) was performed on all the subscales of the BSI. The results showed a significant difference between Men's and Women's scores on the subscales of the BSI (Pillai's Trace = .11, $F(1,237) = 2.82$, $p = .003$) and consequently, univariate tests were calculated.

Cronbach's alphas were also calculated for all the subscales of the BSI. Summary statistics as well as the equivalent Adult Non-Patient T-score Norms (ANN) and equivalent Adolescent Non-Patient T-score Norms (AdNN) from the BSI (Derogatis, 1993) manual can be seen in Table 4.2.

The univariate analyses revealed that there were significant gender differences on six of the nine psychological symptom subscales. Women had significantly higher scores on the Somatisation, Obsessive-Compulsive, Interpersonal Sensitivity, Anxiety, Hostility, and Paranoid symptoms (all p's <.05). There were no

significant gender differences on the subscales of Depression, Phobic Anxiety and

Psychoticism.

Table 4.2

Summary statistics for the BSI subscales for Men and Women

BSI Subscales		Max	Mean	*SD*	α	F	P	A N N	Ad N N
Somatisation	m	2.43	.46	.43	.53	12.03	.001	60	50
	w	3.43	.84	.80	.81			61	57
Obsessive Compulsive	m	3.50	1.17	.75	.80	4.76	.03	67	54
	w	4.00	1.43	.83	.80			65	58
Interpersonal Sensitivity	m	2.75	.98	.71	.65	13.10	<.001	66	52
	w	6.50	1.56	1.15	.80			66	57
Depression	m	3.33	1.00	.86	.85	2.29	.132	67	55
	w	4.00	1.21	.98	.88			64	57
Anxiety	m	3.17	.72	.62	.68	8.42	.004	64	52
	w	3.67	1.10	.86	.82			63	57
Hostility	m	2.80	.75	.75	.79	9.18	.003	61	48
	w	3.40	1.11	.80	.77			66	54
Phobic anxiety	m	2.40	.32	.53	.77	2.56	.111	62	49
	w	3.40	.48	.69	.76			61	54
Paranoid	m	3.40	.77	.69	.71	5.47	.02	60	46
	w	3.80	1.10	.89	.78			64	52
Psychoticism	m	3.20	.74	.71	.67	2.22	.138	67	52
	w	3.40	.92	.84	.72			66	55
General Severity index	m	2.51	.77	.50	-	9.78	.002	66	50
	w	2.98	1.07	.69				66	56

N = 239; *Note*: m = men *(n* = 59); w = women *(n* = 180); Min= Minimum reported score for all subscales, Max= Maximum reported score for subscale; α = Cronbach's Alpha coefficient; ANN = Adult Non-Patient T-score Norms (Men, *N* = 494, Mean age = 46 years; Women, *N* = 480, Mean age = 46 years; Derogatis, 1993); AdNN = Adolescent Non-Patient T-score Norms (Males, *N* = 1,601, Age range 13 years to 19 years of age, *M* = 15.8 years; Females, *N* = 807, Mean age = 15.8 years; Derogatis, 1993).

Cronbach's Alpha coefficients for the BSI (Derogatis, 1993) were consistently better for women than men. They ranged from the lowest of .72 for Psychoticism to a high of .88 for Depression symptoms. Given that the sample size for women was three times that for men and that the men's scores were not analysed separately in the DFAs, the lowreliability coefficients for a couple of the BSI subscales for men was not considered to be a major problem.

It was of interest to note that the means for the present study's sample are closer to the Adolescent Non-Patient norms than to the Adult Non-Patient norms published by Derogatis (1993). This may reflect the fact that people in this study were of an age range that tended more towards the Adolescent norms rather than the adult non-clinical norms. Alternatively, it may reflect cultural differences.

4.2.2 Part 2 Polyserial Correlations for Maladaptive Schemas Represented in Memories and Self-Reported Psychological Symptoms

Polyserial correlations were performed to obtain an overview of the relationships among the self-reported Psychological Symptoms and the maladaptive schemas represented in the memories. Polyserial correlations were chosen for the same reasons that were stated in Study 1 (see pages 130-131). The correlations that were found when the men and women's data were combined can be seen can be seen in Table 4.3.1. Only significant correlations ($p < .01$) are reported above .20.

Table 4.3.1

Significant Polyserial correlations between self-reported Psychological Symptoms and Maladaptive Schemas represented in Early Memories

| | Maladaptive Schemas in Early Childhood Memories | | | | | | | |
	ED	AB	MA	SI	DS	DI	EM	PS
Self- Reported								
Somatisation	.21d		.20b		.23c			-.21b
Obsessive Compulsive	.33b	.35b					.28c	
Interpersonal Sensitivity		.27b .21d			.22c			
Depression		.24b			.23c			
Anxiety	.22c	.25b		.22b	.21b .28c			
Hostility	.25b	.26b			.22c			
Phobic				.27b				
Paranoid	.27c	.24b .35d	.31c		.25c	.20c		-.23d
Psychoticism	.28c	.22b	.22c		.25c			
General Distress	.24b .20c	.29b			.21b, .27c			

N = 227. Note: ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust /Abuse, SI= Social Isolation, DS = Defectiveness/Shame, DI = Dependence/ Incompetence, EM= Enmeshment, PS = Perception of Self; b = Second Early childhood Memory, c= Early Memory of Mother, d = Early Memory of Father; Only Polyserial correlations greater than .20 are reported and they were significant at the level of p <.01.

As seen in Table 4.3.1, the strongest relationships were found between the 'Disconnection and Rejection' domain represented in the memories and self-reported psychological Symptoms. Of the schemas evident in this domain, Abandonment was most represented from the Second Memory and Memory of father. It had links to seven out of the nine sub-scales of the Brief Symptom

Inventory (Derogatis, 1993). Strong relationships were found with Abandonment and self-reported Obsessive-Compulsive symptoms ($r = .35$) and self-reported Paranoid symptoms ($r = .35$). There were also many relationships for Emotional Deprivation and self-reported symptoms. The strongest relationship was between Emotional Deprivation (from memories) and self-reported Obsessive Compulsive symptoms ($r = .33$).

As the analysis of variance results indicated significant differences between men and women on more than half of the BSI (Derogatis, 1993) subscales, further polyserial correlations were conducted separately for men and women. It was decided that additional analyses were warranted after finding that there were no significant relationships ($P < .01$) found above .20 among schemas represented in the First Early Memory and psychological symptoms when men and women were combined in the one analysis. Therefore, separate Polyserial analyses were conducted for men and women. These results are displayed in Table 4.3.2.

Table 4.3.2

Polyserial correlations among maladaptive schemas represented in Early Memories and self-reported Psychological Symptoms for Men and Women

	Maladaptive Schemas in Early Childhood Memories								
	ED	AB	MA	SI	D1	VH	PS	PE	IC
Self-reported									
Somatisation	.36wb		.28wb .27md	.50wa	.50ma .24wa	.24md	-.36wb -.25wd	-.26mc	-.36md
Obsessive-Compulsive	.36wb	.36wb				.49mb	-.37wd		
Interpersonal Sensitivity		.27wb .22wd			.29wd		-.25wb -.39wd		-.22wd
Depression	.21wb	.24wb	.37md		.21wd		-.43wd		
Anxiety		.24wb	.24md				-.39wd	-.47mb	
Hostility	.22wb	.29wb	.50ma		.44mc .33wd		-.24wd	-.34mb	
Phobic				.50wa	.21wd		-.25wd		-.37md
Paranoid	.22wc	.29wb .45wd	.43mc .28wc		.50ma .40mc .29wd		.25mb -.25md -.39wd		-.24wd
Psychoticism	.36mc .20wc	.23wb	.23wc	.31wa	.26wd		.22wb -.49wd		
General Distress	.21wb .34mc	.30wb .24wd			.26wd		-.44wd	-.39mb	

N =219 (*n* = 166 for women and *n* = 53 for men). Note: All the above Polyserial Correlations were significant p <. 01 for Women and P<. 05 for Men; ED = Emotional Deprivation, AB = Abandonment, MA = Mistrust /Abuse, SI= Social Isolation, DI = Dependence/ Incompetence, VH = Vulnerability to Harm, PS = Perception of Self; PE = Perception of the Environment; IC = Degree of Individual Closeness; m = Men, w = Women; a= First Early Childhood Memory; b = Second Early Childhood Memory, c= Early Childhood Memory of Mother, d = Early Childhood Memory of Father

Table 4.3.2 shows a different pattern of relationships to that evident when men and women were combined in the one analysis. In comparison to the relationships in Table 4.3.1, separating men and women revealed that the strongest relationships stemmed mainly from the first early memory for both men and women. For example, even though most relationships were found in the 'Disconnection and Rejection' domain, when the

men and women are analysed separately the individual schemas most represented are

Dependence/Incompetence schemas (from the first early memory) and they are linked

with all the self-reported Psychological Symptoms except Obsessive-Compulsive and

Anxiety. The strongest links were between self-reported Somatisation and

Dependence/Incompetence represented in the first memories ($r = .50$) and self-reported

Paranoid symptoms and Dependence/Incompetence represented in the first memories ($r =$

.50). There are a number of correlations of moderate strength, particularly between Social

Isolation and self-reported Somatisation ($r = .50$) and Phobic Anxiety ($r = .50$).

Another noticeable difference is that the Object Relations categories of

'Perception of Self' and 'Perception of the Environment' as unsafe, were significantly

related to a number of Psychological Symptoms that were not revealed when the men and

women were combined in the one analysis. The strongest relationship for men was

between 'Perceptions of the Environment' as unsafe in the second memory and self-

reported Anxiety ($r = -.47$). For women, the strongest relationships were between a low

'Perception of Self' represented in the memories of Father and self-reported General

Distress ($r = -.44$), Depression ($r = -.43$) and Anxiety ($r = -.39$). Finding these

relationships in the memories of Father may suggest that, for women who perceive an

underlying dependency or lack of competence in relation to father (or men in general),

this unconscious perception is linked to these particular self-reported symptoms.

Another way of examining the relationships among self-reported psychological

symptoms and maladaptive schemas in early memories was to analyse the domains

represented in the memories (Maladaptive schemas, Affect & Object relations) and their

links with groups comprising different levels of self-reported psychological symptoms.

For example, in the case of Young's (1990) 'Disconnection and Rejection' domain, the

maladaptive schema scores associated with this domain were summed to form the domain score. Concurrently, three symptom level groups were formed according to people's GSI T-scores. The low group had GSI T-scores that were more than one standard deviation below the mean. As Derogatis (1993) considers that people with a T-score greater than 63 should be considered a (clinical) case and this was close to one standard deviation above the mean, the high group had T-scores that were more than a T-score of 63. The middle group comprised people with GSI T-scores that were between these two extremes. Relationships among the unconscious schemas and self-reported symptoms are depicted in Figure 4.1
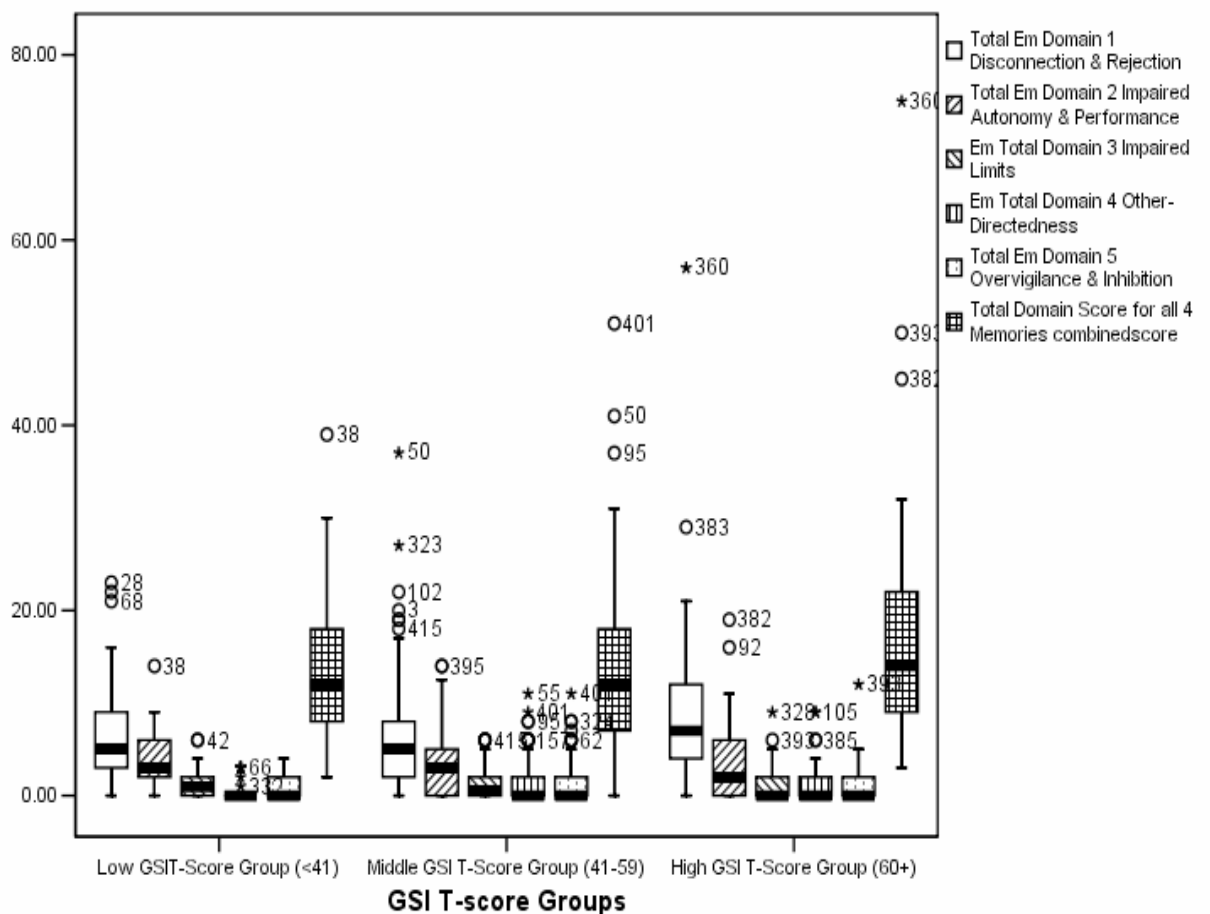
Figure 4.1 Boxplots of Total Domain scores and corresponding self-reported GSI T-Score Groups (Low, Medium and High)

In Figure 4.1, some overlap is apparent in the scores of 'Disconnection and Rejection' domains across the groups. However, there is a trend for scores in this domain to increase (indicating an increase in maladaptive schemas in the memories) as the groups' self-reported Psychological Symptoms scores increase. A similar trend is there, but less apparent, with the 'Total Domain Scores' from schemas represented in the four memories. As Affect and its associated categories were also represented in the Early Childhood Memories, these aspects are depicted along with the same GSI T-score groups in Figure 4.2.
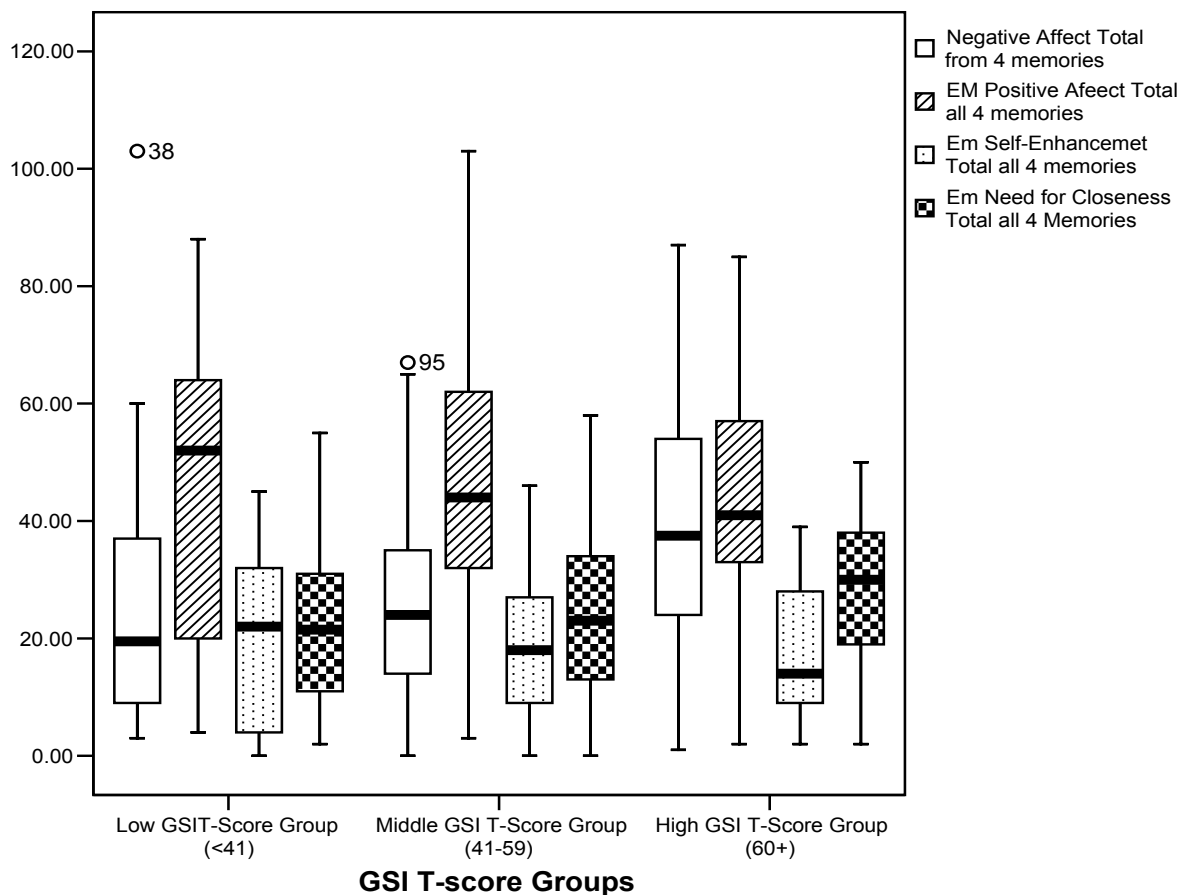
Figure 4.2 Boxplots of Affect Scores represented in the memories and GSI T-Score Groups

In Figure 4.2, Affect scores were summed across all four memories. For example, Positive affect scores for the four memories were summed to give a total Positive Affect score. As shown in Figure 4.2, Negative Affect scores increase across the Psychological groups from low to high. Negative Affect is especially higher in the group with high self-reported Psychological Symptoms when compared with the other two groups. In contrast, Positive Affect decreases as the group's Psychological Symptoms score increases. Yet, as with 'Need for Closeness', there is considerable overlap across the groups. The 'Need for Closeness' is related to a longing for contact and union with others. The median indicates that this need increases as the groups' psychological symptoms increase. As with Positive Affect, Self-Enhancement scores tend to decrease as symptoms increase, which suggests that aspects of self-esteem and self-confidence represented in the memories diminish as the groups increase in symptoms.

The next comparison was to examine the Object Relations that are represented in all four memories and their relationship to the different Psychological Symptoms groups. These relationships can be viewed in Figure 4.3. Looking at the pattern of relationships in Figure .4.3, all the Object Relations domains show considerable overlap across the groups. However, the medians indicate the major trends. For instance, 'Perception of Others' scores decrease from the low and medium groups to the high group. This indicates that as the groups increase in self-reported symptoms, especially from medium to high, other people represented in the memories change from being depicted as need satisfiers (Low group) to being more aggressive or on the periphery (High Group). 'Perception of the Environment ' as being safe has the most dramatic decrease as

the groups increase in Psychological Symptoms. This illustrates that the group

with higher levels of Psychological Symptoms perceive the environment to be less

safe than the lower groups.
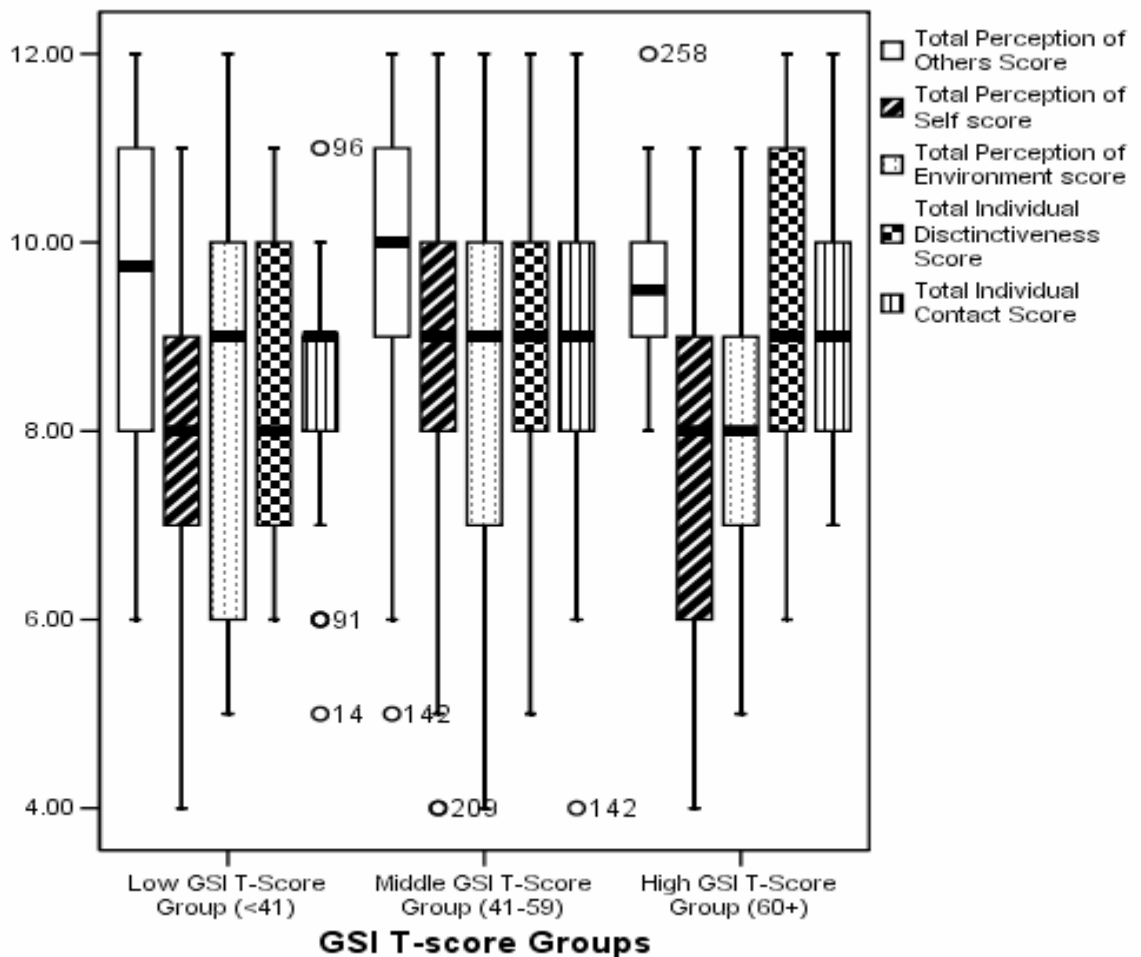
Figure 4.3 The relationship of Object Relations in all four memories to the Low,
Middle and High Psychological Symptoms groups.

Overall, these trends confirm that a relationship exists between

information in the early memories and self-reported psychological symptoms

because the information in the memories is congruent with the different levels of

self-reported information. The people that self-reported more psychological

distress consistently had more Maladaptive Schemas, Negative Affect and

dysfunctional Object Relations represented in their early memories than people that self-reported less psychological distress. Given that these general trends were found, the next step was to examine the difference in these groups in more detail.

It was considered that the focus of the research should be on people with high levels of Psychological Symptoms as these people would be more likely to be the most distressed and therefore in more need of psychological assistance than people with average (Middle Group) or low levels (Low Group). However, the low group could be used as a comparison group. A comparison of individual maladaptive schema scores for the low self-reported GSI score group (approximately one standard deviation below the mean) compared with the high self-reported GSI group (approximately one standard deviation above the mean) can be seen in Table 4.4. Total Maladaptive Schema Scores were calculated by summing the maladaptive schemas ratings across all four memories.

The differences in individual schemas seen in Table 4.4 are not that obvious when comparing the low and high group when all four memories are combined. Social Isolation and Abandonment from the 'Disconnection and Rejection' domain have the largest domain differences along with Subjugation, Self-Sacrifice and Approval-Seeking from the 'Other Directedness' domain. Although these comparisons highlight differences, a more detailed examination of representations of schemas in each memory and their links with self-reported symptoms are investigated in the research questions in the next section.

Table 4.4

Total of Young's Maladaptive Schema scores for all four memories for the Low GSI T-Score Group compared with the High GSI T-Score Group

	Total Maladaptive Schema Scores for all four Early Childhood Memories																	
	ED	MA	AB	SI	DS	DI	VH	EM	FA	ET	IS	SJ	SS	AS	NEG	EI	US	PUN
Schema Domain	1	1	1	1	1	2	2	2	2	3	3	4	4	4	5	5	5	5
Low GSI Group	75	52	40	13	67	31	94	6	13	25	14	5	8	10	15	5	5	4
High GSI Group	98	73	68	29	90	38	80	9	12	22	26	11	15	21	15	6	0	3
Proportional Difference	1.3	1.4	1.7	2.2	1.3	1.2	-1.2	1.5	-.9	-1.1	1.9	2.2	1.9	2.1	1	1.2	0	-1.3

N = 74. *n* = 37 in the Low group, *n* = 37 in the High Group. *Note*: Schema Domain 1 = Disconnection & Rejection, Ed = Emotional Deprivation, MA = Mistrust/Abuse, AB = Abandonment, SI = Social Isolation, DS = Defectiveness/ Shame; Schema Domain 2 = Impaired Autonomy & Performance, DI = Dependence/Incompetence, VH = Vulnerability to Harm, Em = Enmeshment, FA = Failure; Domain 3 = Impaired Limits = ET = Entitlement, IS= Insufficient Self-Control; Domain 4 = Other-Directedness, SJ = Subjugation, SS = Self-Sacrifice, AS = Approval-Seeking; Domain 5 = Overvigilance & Inhibition, NEG = Negativity/ Vulnerability to Error, EI = Emotional Inhibition, US = Unrelenting Standards, PUN = Punitiveness

4.2.3   Part 3: Addressing the Research Question for Study 2 using DFA

Recall that the research questions for Study 2 were whether unconscious maladaptive schemas, object relations and affect represented in early childhood memories are able to distinguish between people that self-reported currently experiencing high levels of psychological symptoms from those with lower levels. Also, which unconscious maladaptive schemas, object relations and affect identify people with high levels of psychological symptoms?

The research questions for Study 2 were addressed by performing Discriminant Function Analyses (DFAs). Discriminant Function Analysis (DFA) was implemented as the statistical choice for the same reasons outlined on pages

140-142. DFA can ascertain the most parsimonious (unconscious) predictors (Early Maladaptive Schemas, Object Relations and Affect) that were represented in the early childhood memories that might best explain group differences in levels of Psychological Symptoms.

4.2.3.1 Background to Defining DFA Groups and Interpreting Predictor Loadings

As there were significant differences between men and women on many of the BSI subscales (see section 4.2), preliminary analyses were conducted for the overall sample and then for women separately. The sample size was not large enough to analyse the men separately using DFA. However, following each DFA on the total sample, women were then selected from the total sample and a second DFA was performed that used the same cut-off scores for the division of groups. Comparison of the results for women with those from the total sample, allowed some inferences to be made about possible gender differences.

The whole sample was used in the first exploratory DFA analysis to initially test for any patterns across the sample that would indicate that unconscious representations of schemas in the memories are able to differentiate the groups at a level beyond chance (33 percent). For the first analysis, three groups were formed by simply dividing the percentage of GSI T-scores into three equal groups – low, middle and high. The low group had GSI T-scores less than 44. The middle group ranged from 44 to 52 and the high group had T-scores greater than 52.

Another method of constructing the groups was used in the second DFA. Given the focus of the research was on people with high levels of distress and

psychological symptoms, low and high groups were formed by T-scores approximately one standard deviation below (40 or less) the mean for the Low Groups and one standard deviation above the mean (greater than 63) for the High Groups. T-scores greater than 63 were chosen for the high groups on the basis of Derogatis' (1993) research. Derogatis suggested that for a person to be defined as a (clinical) case, he or she needed to have a T-score greater than 63. Also, people in the high groups would likely be the most distressed (clear cases). The intention was to get a sufficient number of people in the sample that could be defined as a 'case' (>63; Derogatis, 1993) and a comparison group that was considered relatively free of psychological symptoms (< 40). Consequently, the middle group was not used in the subsequent DFAs as it was considered that people at the extremes of this group would have scores that would be close to the other two groups. Thus, differentiation would be more difficult with the inclusion of a middle group. Therefore, emphasis was placed on the percentage of people correctly predicted to the high groups than the other two groups.

Identifying predictors in the High groups' memories that are represented unconsciously and are linked with self-reported symptoms may indicate (unconscious) areas that need to be focused on in order to help these people. If significant predictors could differentiate these two groups then this would indicate clear links between themes in the memories and people with the highest levels of self-reported distress or symptoms.

4.2.3.2 Predictor loadings

In relation to reporting the DFA results, various predictors of psychological symptoms represented in the memories had negative loadings. In

the case of maladaptive schemas, a negative loading indicates that the predictor

variables had an absence of, or low levels of, that particular schema for people in

the target group (those with high levels of psychological symptoms). For example,

low levels of Mistrust/Abuse and high levels of Abandonment were predictors of

Depression symptoms. The negative loadings for Mistrust/Abuse can be

interpreted as an absence or lack of this schema for the group with high levels of

depression symptoms.

In contrast, negative loadings associated with Object Relations indicate

that there are high levels of the particular category. For example, a negative

loading of 'Perception of Self' can be interpreted as the person having no mastery

over the environment as opposed to high levels where the person is able to master

the environment. (See Betz [1987] for a full discussion on the interpretation of

negative loadings in DFA).

Summary DFA statistics for the General Severity Index (GSI; Derogatis,

1993) and the entire psychological symptom subscales of the Brief Symptom

Inventory (BSI; Derogatis, 1993) for the total sample followed by low and high

groups are displayed in Table 4.5 and for women in Table 4.6. As shown in Table

4.5 and Table 4.6 significant discriminant functions were found for the GSI and

all subscales of the BSI.

Table 4.5

Descriptive Statistics for Discriminant Function Analyses of the BSI Subscales for Men and Women

Groups	Eigen-Value	Canonical Correlation	Wilks Lambda	Chi Square	Group Centroids
GSI (1st #)	.06	.24	.94	$\chi 2(2) = 14.50$**	-.17 low group -.18 mid group .35 high group
GSI (2nd #)	.09	.29	.92	$\chi 2(2) = 21.08$***	-.14 low group -.10 mid group .80 high group
GSI	.20	.41	.83	$\chi 2(3) = 11.93$**	-.45 low group .43 high group
Somatisation	.15	.36	.87	$\chi 2(2) = 9.11$*	-.36 low group .41 high group
Obsessive-Compulsive	.38	.53	.73	$\chi 2(4) = 28.33$***	-.62 low group .60 high group
Interpersonal - Sensitivity	.19	.40	.84	$\chi 2(3) = 13.75$**	-.44 low group .42 high group
Depression	.15	.37	.87	$\chi 2(3) = 13.90$**	.38 low group -.39 high group
Anxiety	.28	.47	.78	$\chi 2(3) = 14.06$**	.80 low group -.34 high group
Hostility	.30	.48	.77	$\chi 2(4) = 22.24$***	-.47 low group .62 high group
Phobic	.08	.27	.93	$\chi 2(2) = 9.80$**	.15 low group -.50 high group
Paranoid	.14	.35	.88	$\chi 2(3) = 12.86$**	-.30 low group .46 high group
Psychoticism	.53	.59	.65	$\chi 2(6) = 32.02$***	.78 low group -.67 high group

$N = 253$; *Note:* GSI 1st # = analyses used the whole sample divided into three equal groups; GSI 2nd # = analyses used the whole sample divided into three groups based on T-scores; $p<.05$ = *; $p<.01$ = **; $p<.001$ = ***.

Table 4.6

Descriptive Statistics for Discriminant Function Analyses of the BSI Subscales for Women

Groups	Eigen-Value	Canonical Correlation	Wilks Lambda	Chi Square	Group Centroids
GSI (1st #)	.05	.22	.95	$\chi2(2) = 8.79$*	-.12 low group -.22 mid group .27 high group
GSI (2nd #)	.10	.30	.91	$\chi2(2) = 16.14$***	-.12 low group -.13 mid group .71 high group
GSI	.30	.48	.77	$\chi2(3) = 13.42$**	-.61 low group .47 high group
Somatisation	.16	.37	.86	$\chi2(3) = 8.46$*	.44 low group -.36 high group
Obsessive-Compulsive	.20	.41	.84	$\chi2(3) = 12.70$**	.52 low group -.37 high group
Interpersonal - Sensitivity	.43	.55	.70	$\chi2(4) = 21.07$***	.80 low group -.52 high group
Depression	.16	.37	.86	$\chi2(2) = 9.29$*	-.44 low group .36 high group
Anxiety	.26	.45	.80	$\chi2(3) = 11.34$*	.76 low group -.33 high group
Hostility	.33	.50	.75	$\chi2(4) = 17.13$**	-.56 low group .56 high group
Phobic	.15	.37	.87	$\chi2(2) = 14.33$**	.23 low group -.65 high group
Paranoid	.18	.39	.85	$\chi2(2) = 12.56$**	-.37 low group .47 high group
Psychoticism	.27	.46	.79	$\chi2(3) = 13.93$**	-.60 low group .43 high group

$N = 253$; *Note:* GSI 1st # = analyses used the whole sample divided into three equal groups; GSI 2nd # = analyses used the whole sample divided into three groups based on T-scores; *= $p < .05$; ** = $p<.01$; *** = $p<.001$.

4.2.3.3 DFA Results for the Total Sample using Equal Groups and then T-Score Groups

In the first two analyses, the predictor variables entered were the maladaptive schema domains (Young, 1998) coded from the early childhood memories. Schema domains capture the maladaptive schemas that are particularly related to that domain. As the data analysis was exploratory, following the first analysis that entered domains as the predictors, the second analysis used specific maladaptive schemas. These predictors were entered using the stepwise method as a comparison analysis. As in Study 1, the cross validation method was used.

Table 4.7 displays the specific domain predictors and percentage of correct allocations to the three groups using two different methods of constructing the groups (equal groups and T-scores groups). As evident in Table 4.7, out of the five maladaptive schema domains, the 'Disconnection and Rejection' domain emerged as the significant predictor that was able to differentiate low, medium and high GSI groups. Even when GSI groups were formed with a different T-scores cut-off, and were of different sizes, the same predictor was extracted from the early memories. When the analyses were performed using the GSI T- score groups that designated people in the high group with T-scores greater than 63, the correct allocations to the high group increased (about 5%) in comparison to the DFA where equal groups were used based on an equal division of people.

The results from the first analysis confirmed a rationale for using only the low and high groups in ensuing analyses and omitting the middle groups. The middle group was difficult to correctly predict, probably because people in this group at both T-score extremes may either tend towards low symptoms or high symptoms, and thus resulted in a lack of clear differentiation between groups.

Table 4.7

DFA Results of People in the Low, Middle and High T-Score GSI Groups

Significant Domain Predictors from Early Childhood Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low, Middle and High Groups
		GSI Equal Groups*
		Low GSI Group 9% *n* = 80
Total scores from Domain 1 Disconnection & Rejection	**1.00**	Mid GSI Group 60% *n* = 82
		High GSI Group 45% *n* = 83
		GSI Equal Groups (Women)
		Low GSI Group 4% *n* = 47
Total scores from Domain 1 Disconnection & Rejection	**1.00**	Mid GSI Group 66% *n* = 61
		High GSI Group 49% *n* = 72
		GSI T score Groups
		Low GSI Group 56% *n* = 50
EM 2 Domain 1 Disconnection & Rejection	**1.00**	Mid GSI Group 22% *n* = 165
		High GSI Group 50% *n* = 30
		GSI T Score Group (women)
		Low GSI Group 6% *n* = 34
EM 2 Domain 1 Disconnection & Rejection	**1.00**	Mid GSI Group 61% *n* = 118
		High GSI Group 54% *n* = 28

N = 263; *Note*: GSI Equal Groups were calculated to form three equally sized groups. T-Score Groups were based on the high group having T-Scores greater than 63, the low group less than 43 and the middle group between 43 and 63.

For example, in Table 4.7, when the groups were formed using T-scores such as the high group with T-scores greater than 63, the predictor results for the middle group were less than chance (22 percent). In contrast, the results for the low and high groups were better than chance (56 and 50 percent respectively).

4.2.3.4 DFA Results for the General Severity Index groups

The following DFAs investigated the GSI and then each Psychological Symptom in turn. After each DFA result, a case study example is presented to illustrate the predictors that identified people in the high symptom groups. As the sample has approximately four times as many women than men, more examples of women's memories are used than men's. The respondents were able to clarify important aspects of the memory that may not always be obvious to the reader by answering 'What was the clearest part of the memory?', 'What was the strongest feeling in the memory?', 'What thought or action is this connected with? And, 'If you could change the memory in any way what would that be?' The self-rated Affect terms after the memory also aided in the interpretation. Any identifying features have been removed from the following case studies to protect people's anonymity and to ensure confidentiality.

Stepwise analysis was again used in the DFAs. Instead of entering domains as the predictors as was done in the first analysis, individual schemas were entered as predictor variables. It was believed that using individual schemas rather than domains might increase the percentage of correct allocations to groups, as in the Polyserial Correlations some individual schemas had stronger relationships than others from the same domain in their link to psychological symptoms. The predictor variables from the early childhood memories that were

best able to identify people with differing levels (low & high groups) of self-reported distress (GSI scores) and psychological symptoms can be seen in Table 4.8.

Table 4.8

DFA Results of People in the Low and High GSI T-Score groups.

Schema Predictors from Early Childhood Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		GSI
		Low GSI Group 47% *n* = 34
EM Father: Abandonment	**.88**	
EM Mother: Insufficient Self-Control/Self-Discipline	**.76**	
EM Father: Perception of Environment	**.76**	High GSI Group 83% *n* = 35
		GSI for Women
		Low GSI Group 50% *n* = 24
EM Father: Abandonment	**.95**	
EM Mother: Insufficient Self-Control/Self-Discipline	**.83**	
EM Father: Perceptions of the Environment	**.66**	High GSI Group 84% *n* = 31

N = 253

Eighty–three percent of people with high levels of self-reported GSI levels (general distress) were correctly predicted by Abandonment (in Memory of Father), Insufficient Self-Control (in Memory of Mother) schemas and the Perception of the Environment as safe (in Memory of Father) that were represented in their early childhood memories. For Women, representations of Abandonment and Insufficient Self-Control were the strongest predictors,

followed by 'Perceiving the Environment' to be safe. Feeling Abandoned and out of control even though the environment is considered safe were the main factors that identified people with high levels of distress.

'Perceiving the Environment as Safe' in relation to memory of Father seems to be in contrast to the other predictors. However, this may indicate that distress tends to be more related to insufficient self-control or discipline in relation to mother and an absence of father. In relation to father there may well be a perception that the environment was safe. The following early childhood memory contains an example of Abandonment (rated as 'Quite a bit') from Early Memory of Father from a woman who was 19 years of age with high scores on the GSI (distress index).

> 'My father came home from work and he was in his and mum's room in front of a full length mirror undoing his tie and loosening it from his neck. My mother had followed me up there to smack me and I was **hysterical**, running around dad's legs **screaming for him to not let me get smacked, and he didn't do a thing**. **I felt so angry that he didn't do anything**. He just stood there loosening his tie'.

The clearest part of the memory was screaming 'Dad, dad'. This memory clearly indicates feelings of being abandoned by her father in her hour of need. Her father's (or men's) response was unpredictable and unsupportive. There are also elements of Insufficient Self-Control in this memory, from both the mother and the child, which is another of the predictors. She states that if she could change the memory '**I would stomp on his (father's) toes'** further endorsing a lack of self-control and her anger. She is angry at her father for abandoning her as she thought that she would be protected (safe) with him. There were self-ratings of Powerlessness = 4; Loneliness = 4 and Anger = 3 after the memory.

Given that this person indicates high levels of distress, the themes of abandonment by her father (which also may represent men) when she most needs help or protection, would be an area to investigate further in relation to this person's general distress. Her distress may also be related to her lack of control in these situations and the lack of control of her mother (other women) in the memory, which may be suggesting that there are problems in her relations with mother and/or particular women. The memory gives a starting point for discussions in therapy that may uncover the source of her distress. The following Early Childhood Memory is from the same person and is a clear example of the predictor variable Insufficient Self-Control (from Early Memory of Mother).

> 'My mother was supposed to pick me up from school, and I'd thought **she'd forgotten as usual** so I just started wandering home. Turns out she was running late so she got to the school late, but I was already on my way home. She decided to stop waiting, and drove by me on the way home. **She went crazy** and said "get in the car now!" she was yelling saying she'd been sitting at the school with the car's motor running and she was nearly out of petrol. **I told her she was stupid** for making her petrol run out like that and **she went crazy. I felt so scared** because **I was just a kid having fun**, and then she came along and yelled at me!'

This memory depicts Insufficient Self-control (by the child and the mother) by the child **not waiting for her mother** and the mother **'going crazy'**. In this memory the person does not portray any insight into the mother's feelings or a perception of being in the wrong. *The clearest part of the memory* was mother **'…going crazy over the petrol'.** Rather than an over-controlling mother, this memory illustrates a lack of control. There are also aspects of Abandonment in the memory in that the child felt that 'She (her mother) had forgotten her **as usual'**. The themes of abandonment and insufficient control have surfaced again in this memory. There is also lack of awareness of her ability to anger her mother by

telling her "She was stupid for making her petrol run out like that." The two

memories have plenty of information to begin a discussion in therapy that would

focus on these issues and associated feelings.

4.2.3.5 DFA Results for Somatisation symptoms

Predictors from the early childhood memories that were best able to

identify people with high and low levels of self-reported Somatisation can be seen

in Table 4.9.

Table 4.9

DFA Results of people in the Low and High Somatisation Symptoms groups

Schema Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Somatisation
		Low Group 66%
EM 1: Negative Affect (Self-rated)	**.89**	$n = 44$
EM1 Negativity/Vulnerability to Error	**-.69**	
		High Group 69%
		$n = 36$
		Somatisation (Women)
		Low Group 48%
		$n = 27$
EM1: Perception of Environment	**-.53**	
EM 1: Negative Affect	**.45**	
EM 1 Negativity/Vulnerability to Error	**-.62**	High Group 82%
		$n = 33$

$N = 253$

The main predictors that differentiated the people in the high Somatisation

(Perception of bodily dysfunction) group from the low group were Negative

Affect from the First Early Childhood Memory and low levels of Vulnerability to

Error/Negativity. Negative Affect included such feelings as Powerlessness;

Anxiety; Shame; Self-alienation; Guilt; Loneliness; Inferiority and Anger.

Interestingly, when the men were omitted from the analysis, the results for

women revealed the main predictor to be 'Perceiving the Environment to be

Unsafe' (in First Early Childhood Memory) which was not present in the DFA

results when the men were included. Perceiving that the environment is unsafe

may be more crucial to women's somatisation symptoms than it is for men. The

addition of this predictor also increased the percentage of Women correctly

allocated to the Group with high levels of self-reported Somatic complaints from

69 percent (for the total sample) to 82 percent when only women were selected.

This may indicate that men and women have different underlying issues when it

comes to discomfort with one's body. Finding low levels of 'Vulnerability to

Error' is more difficult to interpret. It is possible that people in the high group feel

on the one hand that aspects of their world are controllable but in other respects

that they are not. It is possible that the Negative Affect is more unconscious and is

not being effectively dealt with which leads to somatisation symptoms.

The following memory is from a woman aged 19 years of age who was

from the group with High levels of self-reported Somatisation symptoms. This

early childhood memory was self-rated to contain high levels of Negative Affect

and it also contains an absence of Negativity or Vulnerability to Error.

> 'When I was **picked on at school** because I believed I was a fairy and the
> other children really upset me so I **hid under** the old school building. It
> was dark and cold and smelly and **I wouldn't come out** until my mother
> came and picked me up. I didn't cry, I just waited until she came'.

The clearest part of the memory was '**being under the school building'**.

The strongest feeling was **'I don't belong and people don't understand me'** (Social Isolation). She is not suggesting that she is the one at fault but rather she feels that she does not belong. The following Negative affect terms were endorsed after the memory and were self-rated as: Powerlessness 4; Anxiety 4; Self-alienation 4; Loneliness 4; and Anger 3. Mistrust/Abuse is also evident, with the perception of being picked on by the other children. It is interesting to note that when she was distressed she did not cry. There is no obvious reference to a somatic complaint in this memory, however some of the affect terms that were rated highly could be investigated as a possible source of the underlying somatic symptoms.

4.2.3.6 DFA Results for Obsessive-Compulsive Symptoms

The following Table 4.10 indicates the significant predictor variables represented in the early childhood memories that best identified people with high levels of Obsessive - Compulsive symptoms. As shown in Table 4.10, the predictor variables of Negative Affect, Emotional Deprivation, Individual Distinctiveness (Others are highly distinctive with prominent characteristics or qualities) and Approval seeking represented in the First Early Childhood Memories identified people with high self-reported levels of Obsessive Compulsive symptoms. These predictors correctly predicted 70 percent of people with high levels of Obsessive-Compulsive symptoms. For women, 'Perception of the Environment' as unsafe and Approval Seeking correctly predicted 81 percent of Women with high levels of Obsessive Compulsive symptoms. It is again of interest to note that when women were analysed without the men, a 'Perception

that the Environment was Unsafe" emerged as the strongest predictor which also

increased the correct percentage of allocating women to the high group. It was not

a significant predictor at all when the men were included in the analysis.

Table 4.10

DFA Results of People in the Low and High Obsessive-Compulsive Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Obsessive Compulsive
EM 1: Negative Affect	**.60**	Low Group 80%
EM 2: Emotional Deprivation	**.58**	$n = 45$
EM 1 Individual Distinctiveness	**.48**	
EM 1: Approval-Seeking/Recognition-Seeking	**.38**	High Group 70%
		$n = 47$
		Obsessive Compulsive (Women)
EM 1: Perception of Environment	**-.69**	Low Group 52%
EM 1 Negativity/Vulnerability to Error	**-.66**	$n = 31$
EM 1: Approval-Seeking/Recognition-Seeking	**.60**	High Group 81%
		$n = 43$

$N = 253$

The following early childhood memory portrays an example of self-rated

Negative-Affect. The memory is from a woman who was 35 years old and was in

the group with high levels of Obsessive-Compulsive symptoms.

> 'When I was 5 years old I won an award at school. When the next awards
> were being presented the following year, a Mother of another child came
> up to me and said that she hoped I didn't win again as I had been naughty
> – resulting in her child crying (**I don't know what I had actually done**).
> This resulted in me bursting into tears and **I was unable to be consoled**.
> As the mother had hoped, I ended up not winning the award.'

The *clearest part* of the memory was **'the mother's nastiness – it scared me'.** The *strongest feeling* was **'embarrassment at crying.'** Negative affect was self-rated as Powerlessness 4; Anxiety 3; Self-alienation 4; Inferiority 4; and Anger 4. This memory indicates that this person felt wrongly accused and scared by the other mother's nastiness. Her Obsessive-Compulsive symptoms could be investigated by using the memory as a metaphor for present day themes of victimisation (for no apparent reason) and the associated anxiety and powerlessness that may be associated with these feelings.

The following memory is an example of the predictor Emotional Deprivation from a man who was 23 years of age. He also had high levels of self-rated Obsessive Compulsive symptoms.

> 'I remember one time when my brother and I came home late from playing. My mother was **very angry** with both of us and **threatened to punish** us if we were late again. **I was very frightened** because it was the **first time that I had seen her this angry**.'

The clearest part of memory was **'when my mother threatened to punish us.'** The strongest feeling was '**being frightened.'** Emotional Deprivation is present in this case as there is an absence of understanding, listening, affection, or warmth from the mother after the brothers returned home from playing. This boy was expecting that his mother would exhibit her normal degree of emotional support, however, this was not there. This unexpected outburst by his mother and his ensuing anxiety is something that could be explored further in relation to similar feelings at the present time.

4.2.3.7   DFA Results for Interpersonal Sensitivity Symptoms

The following Table 4.11 reports DFA predictors for people with low and high Levels of Interpersonal Sensitivity. The group with high levels of Interpersonal Sensitivity were identified by the significant predictors of 'Individual Distinctiveness', 'Perceptions of the Environment' as being unsafe (in First Early Memory) and Negative Affect (Early Memory of Father).

Table 4.11

DFA Results for People in the Low and High Interpersonal-Sensitivity Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Interpersonal Sensitivity
EM 1: Individual Distinctiveness	**.76**	Low Group 70%
EM 1: Perceptions of the Environment	**-.61**	$\underline{n} = 40$
EM Father: Negative Affect	**.55**	
		High Group 64%
		$n = 42$
		Interpersonal Sensitivity (Women)
		Low Group 41%
EM 1: Perception of Environment	**-.77**	$n = 29$
EM Mother: Positive Affect	**-.65**	
EM 1: Insufficient Self-Control/Self-Discipline	**-.60**	
EM Father: Insufficient Self-Control/Self-Discipline	**-.52**	High Group 78%
		$n = 40$

$N = 253$

The predictors correctly identified 64 percent of people in the high group and 64 percent in the low group. For women, the addition of low levels of Positive Affect (from Early Memory of Mother) and low levels of Insufficient Self-Control (EM 1) increased the correct allocation of Women to the high group. Seventy-eight percent of Women with high Levels of Interpersonal Sensitivity and 41 percent of women with low levels. These people may display self-control but perceive the environment to be threatening and have low levels of happiness, trust or satisfaction, in regards to relations with mother or other women.

The following memory is from a woman aged 19 years of age from the group with high levels of Interpersonal Sensitivity. The memory exhibits both predictor variables.

'My dad decided to buy gifts for my brothers **but didn't give me anything.'**

The clearest part of memory was 'watching my brothers play with their new toys '**I felt left out by not receiving a gift'**. Negative affect was self-rated as: Powerlessness 4; Self-alienation 4; Loneliness 4; Inferiority 4; Anger 4. Interpersonal Sensitivity symptoms such as personal inadequacy and inferiority, especially when evaluating oneself against others are clearly represented in this memory. This person felt deprived (of a present) from her father. This deprivation was felt on an emotional level and was confirmed by her negative affect ratings. The memory provides an insight into this person's feelings of isolation and that she felt her father favoured her brothers or thought more of them (loved them) more than herself. The present self-reported symptoms can be examined with her memory perceptions in mind. She may have felt neglected and less of a person

than her brothers all her life. These feelings may be unresolved and therefore

underpin her Interpersonal Sensitivity symptoms.

4.2.3.8 *DFA Results for Depression Symptoms*

The predictors that differentiated people with self-reported Depression can

be seen in Table 4.12. The Early Childhood predictor variables that best identified

people (90 percent) with high levels of Depression were representations of

Abandonment (in Early Memory 2). There was also an absence of Mistrust and

Negativity.

Table 4.12

DFA Results for People in the Low and High Depression Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Depression
		Low Group 33%
EM 2: Abandonment	**.67**	$n = 51$
EM 1: Mistrust/Abuse	**-.76**	
EM 1: Negativity/Vulnerability to Error	**-.30**	
		High Group 90%
		$n = 50$
		Depression (Women)
		Low Group 45%
EM Father: Abandonment	**1.07**	$n = 29$
EM Father: Perceptions of the Environment	**.77**	High Group 78%
		$n = 36$

$N = 253$

For Women, Abandonment and 'Perceiving the Environment to be Safe' (from Early Memory of Father) correctly predicted 78 percent of the Women in the high Depression Group. These results indicate that people who are depressed feel somewhat (unconsciously) Abandoned in contrast to people with lower levels of depression. For Women, as representations of Abandonment came from Memories of Father, there may also be links between feeling Abandoned by their father and depression. The combination of predictors suggest that the environment is perceived as safe and there is not a perception of Mistrust or negativity but these people are still abandoned by significant others. The following example of Abandonment was from a 19 year old man. He was from the group with high levels of Depression symptoms.

> 'When me and mum were at home alone and we were having a cuddle, mum saw a man putting rubbish in our dumpster. When she came back inside she was cross and no longer felt like having a cuddle.'

The *clearest part* of memory was **'Mum yelling at the man'.** The *strongest feeling* was **'Disappointment at no longer being able to continue the cuddle.'**

There are plenty of possible directions to explore in this memory. As this man had high levels of Depression symptoms it is possible that he feels a lack of connection and importance with people who are close to him. Just when he feels secure, his mother is distracted by someone else and when she returns she is angry and in a sense punishes him by not continuing with their cuddle. She abandoned him for another person and he feels abandoned and emotionally deprived when he reports his disappointment. The advantage of the early memory is that it is a concrete example of abandonment and emotional deprivation that can be explored

to get at the underlying feelings that may be attached to these sorts of occurrences.
His depression can be approached with these components in mind.

4.2.3.9 DFA Results for Anxiety Symptoms

Table 4.13 indicates the predictor variables that best predicted membership to the group with high levels of Anxiety. As evident in Table 4.13, the predictors that correctly allocated 81 percent of people to the high Anxiety Group were a low 'Perception of Self', which is related to a lack of mastery over their environment, along with representations of Abandonment. There is also an absence of Subjugation for these people. For Women, the same predictors identified all of the people in the high Anxiety Group.

Table 4.13

DFA Results for People in the Low and High Anxiety Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Anxiety
		Low Group 56%
EM Father: Perceptions of Self	**-.69**	$n = 18$
EM 2: Subjugation	**-.69**	
EM 2: Abandonment	**.53**	High Group 81%
		$n = 42$
		Anxiety (Women)
EM 2: Subjugation	**-.73**	Low Group 13%
EM 2: Abandonment	**.58**	$n = 16$
EM Father: Perceptions of Self	**-.57**	High Group 100%
		$\underline{n} = 37$

N = 253

The following memory is from a woman who was 18 years of age with high levels of self-reported Anxiety. Her memory is an example of the predictor 'Perception of Self' (Low).

> 'Just after my **mother left** and my father *had to* take care of me and my sister. I remember once my dad was trying to put my sisters hair in a ponytail and **he just couldn't get it right** so my sister was whinging. I felt sorry for him because he was trying his best and my sister just didn't appreciate that.'

The clearest part of the memory was: 'my sister complaining when my dad hurt her by pulling on her hair too hard.' The strongest feeling in the memory was **'sad for my dad, guilt** because **I had put him in this position.**' For some reason this person feels as though she has placed her father in this position. Possibly she felt it was her job to put her sister's hair into a ponytail but was unable to. She has no mastery over the situation and consequently self-rated the affect terms as powerlessness = 3; guilty = 4; and loneliness = 3. These aspects of guilt and powerlessness in this situation or for that matter any of her present situations may help to explain her feelings of anxiety. The memory also suggests that this person is unable to do certain things that she feels she should be able to do and then feels guilty for asking other people to help. The memory makes it possible to explore these feelings in more detail.

The second predictor that identified people with high levels of Anxiety was Abandonment from the Second early childhood memory. The following example of Abandonment is from the same person as above.

> 'When I came home with my Dad **and my Mother was gone**, the lounge-room, kitchen and other rooms were different. Things were missing, **I was in total shock, it was unexpected.** Even though she abused me [mother] **I wanted her back**.'

This person clearly felt abandoned by her mother even though her mother was abusive. A lack of control or mastery of this situation is also apparent. Anxiety was also self-rated as 'Extreme'. The memory has the advantage over the self-reported measure (Anxiety symptoms) as it places her anxiety in a context of feeling abandoned. Abandonment can be discussed with this client to investigate whether it may be the main factor underlying her anxiety.

4.2.3.10 DFA Results for Hostility Symptoms

The following Table 4.14 displays the predictors that differentiated people with low and high levels of self-reported Hostility.

Table 4.14

DFA Results for people in the Low and High Hostility Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Hostility
EM 2: Negative Affect	.71	Low Group 72%
EM 1: Individual Distinctiveness	.46	*n* = 50
EM 1: Recognition Seeking/Approval-Seeking	.48	
EM Father: Perception of Self	-.38	High Group 66%
		n = 38
		Hostility (Women)
EM 2: Negative Affect	.64	Low Group 72%
EM Father: Perception of Self	-.54	*n* = 32
EM 1: Recognition Seeking/Approval-Seeking	.50	
EM 1: Individual Distinctiveness	.44	High Group 69%
		n = 32

N = 253

Negative Affect (represented in Second Early Childhood Memories), Individual Distinctiveness (from First Early Memory), Approval Seeking (from First Early Memory) and a low 'Perception of the Self' as having no mastery over the environment (from Early Childhood Memory of Father) were the predictors that correctly predicted 66 percent of people in the high Hostility group. For Women, the predictor variables were the same, however, Negative Affect and a low Perception of the Self had the highest standardised coefficients and the predictors correctly predicted 69 percent of Women in the high Hostility group. This result suggests that Negative Affect (Powerlessness; Anxiety; Shame; Self-alienation; Guilt; Loneliness; Inferiority and Anger) together with a perception of the self as lacking in mastery, while concurrently seeking approval, may underpin self-reported Hostility. That a 'Low Perception of Self' was related to Memory of Father may indicate that this perception developed from having a father who did not encourage his child. He may have been critical and set high standards.

The following early childhood memory is from a woman aged 22 years who was from the group with high levels of Hostility symptoms. This memory depicts examples of Negative Affect and also a low perception of the self by typifying minimal mastery over the environment.

> 'When my **mother hit me** because I had **failed to clean the house to her satisfaction.** She came home from work at 4 pm, I had arrived home from school at 1 pm. That gave me 3 hours at home before she came. I spent this time playing with my friends. When she arrived, the house was in a mess, we had no housekeeper then. She then took a **thin branch from a tree and hit me. I begged her to stop but she would not stop, but told me how irresponsible I was**. How could I leave the house this dirty? After that I was green all over from the beatings. When my father came home after she went to her night classes, I told him, **I hated that woman**, she is not my mother, and **I prayed that she would die**. I promised my father and myself **I would never cry if she died**.'

The clearest part of the memory was **'My begging her to stop'** and the strongest feeling in memory was **'Hate'**. If I could change the memory: 'I would tell her to her face how **I hate and loathe her.** Even run away from home.' Self-rated negative affect was high with Powerlessness 4; Anxiety 4; Self-alienation 4; Guilt 3; Loneliness 4; Inferiority 4; and Anger 4; Clearness of the memory was self-rated as 4 and Importance of the memory was also self-rated as 4. This memory overtly signifies hostility of the person towards her mother and suggests that she is a victim of her mother's rage. It is clear that her hostility is centered on her rage towards her mother.

This next memory is an example of the predictor Recognition Seeking/Approval Seeking from a man who was 19 years of age. He also was from the group that self-reported high levels of Hostility.

> 'On my first day of high school I was fresh straight out of primary school where I had been school captain. I remember it was recess and the coolest gang was sitting attractively on the concrete steps and railing. I overhead them talking about cigarettes, alcohol, girls and really cool stuff after that. At that moment I thought that there was something wrong with me because I did not have any of these things in my life. From that moment on I needed to be better at what these guys were good at or else I was a failure. I began to be competitive.'

The strongest feeling in the memory was '**that these guys were more popular than me. I became competitive.'** This person's self-reported Hostility may be related to feelings of needing to achieve and to be recognised and approved by others. There is a sense in the memory that he is missing out on the good things. His Self-Esteem rating was 0, his Anxiety was 3 and he felt inferior = 4. He feels that by being more competitive with these other men that he can be better than them and gain the same rewards. He wanted approval and the memory

may suggest that his hostility may be related to these feeling of missing out on the "cool" stuff.

4.2.3.11 DFA Results for Phobic Anxiety Symptoms

The following Table 4.15 displays the predictors that differentiated people with low and high levels of Phobic Anxiety symptoms. As shown in Table 4.15 'Perceptions of the Environment' as being unsafe and low 'Perceptions of self' (lack of mastery over the environment) correctly predicted 71 percent of people in the high Phobic anxiety group. This result was virtually the same for women in the Phobic Anxiety groups as well.

Table 4.15

DFA Results for People in the Low and High Phobic Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Classifications for Low and High Groups
		Phobic
		Low Group 56%
EM 1: Perceptions of Environment	**-.78**	*n* = 102
EM Father: Perception of Self	**-.61**	High Group 71%
		n = 31
		Phobic (Women)
		Low Group 70%
EM 1: Perceptions of Environment	**-.85**	*n* = 76
EM Father: Perception of Self	**-.54**	High Group 70%
		n = 27

N = 253

The following memories are taken from a man (19 years old) and depicts both predictors in the memory. He was from the group with high levels of self-reported Phobic Anxiety symptoms.

> 'Waking up when I was 4 years old and **being caught for breath.** Not being an asthmatic I was having **similar symptoms of an asthma attack** and I remember myself in my old living room and my parent coming to my aid. After that I recall bright lights of the hospital and remember a doctors white coat.'

The clearest part of the memory was 'being in the living room experiencing the attack.' If I could change the memory it would be **'That I didn't feel so much fear as I did.'** The self-rated aspects of the memory were Powerlessness 4; and Anxiety 4. The same person also had this memory (Second):

> 'An uncle who I loved took me to the park with his son and daughter. I **was extremely afraid of heights** and **my uncle held me over the side of the bridge**. **I was terrified** and he laughed in a way that I did not think was like him'.

The two memories from this man clearly illustrate anxiety. The first memory depicts a suffocating environment and a lack of ability (mastery) to do anything about the situation. In the second memory, some one that he trusts terrifies him in a way that he did not think was possible. He had a fear (phobia) of heights and people cannot be trusted as they scared him with the very thing he was afraid of. His phobic anxiety may be related to his feelings of powerlessness and experiences of mistrust and abuse from others. The memories make it possible to explore these areas in more depth. Interestingly, a number of the early childhood memories of people with the high levels of self-reported Phobic symptoms had memories that depicted head injuries. There was also fear involved.

4.2.3.12 DFA Results for Paranoid Symptoms

The results for people in the low and high groups with Paranoid symptoms are shown in Table 4.16. The predictors that were found to identify people with high levels of Paranoid symptoms were Abandonment (in the first Early Memory and Early Memory of Father) and Individual Distinctiveness (in Early Memory of Mother). These variables correctly predicted 70 percent of people in the high group. For Women, the predictors were entirely different to when the men were included. Representations of Vulnerability to Harm and Negative Affect (Memories of Mother) correctly predicted 66 percent of women with high levels of Paranoid symptoms.

Table 4.16

DFA Results for People in the Low and High Paranoid Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Group Classifications for Low and High Groups
		Paranoid
EM 2: Abandonment	**.60**	Low Group 66%
EM Father: Abandonment	**.58**	*n* = 61
EM Mother: Individual Distinctiveness	**.58**	High Group 70%
		n = 40
		Paranoid for Women
		Low Group 80%
EM 1: Vulnerability to Harm	**.80**	*n* = 44
EM Mother: Negative Affect	**.73**	High Group 66%
		n = 35

N = 253

The following second early childhood memory is from a woman who was 18 years of age. She was in the group with high levels of self-reported Paranoid symptoms. The memory depicts Abandonment and Vulnerability to Harm.

> 'The first time I got **bullied** I was in prep (the year before the first grade at school) and my friends and I would play "follow the leader" every recess. Every time we would play it **they always used to put me in the end of the line. They would try to run ahead of me, eventually running away** from me. **I would try to catch up to them but never could**.'

The clearest part of the memory was **standing at the end of the line**. The strongest feeling **was being bullied. I felt very upset.** This memory clearly illustrates being abandoned. Her 'friends' put her last and then ran away from her. There are also element s of Mistrust, defectiveness, social isolation and failure present in the memory. The feelings are confirmed by this person's self-ratings of Powerlessness 4; Self-esteem 0; Anxiety 4; Care 0; Love 0; Self-alienation 4; Tenderness 0; Self-confidence 0; Loneliness 4; Trust 0; Inferiority 4; Safety 0; Anger 4. Interestingly, this woman's early childhood memory of Mother had a line '…and going home meant safety from the outside world', which reinforced the feeling that the outside environment was not safe.

The memory helps the reader to understand this woman's feeling of paranoia, as the people around her that she trusts (friends) end up deserting and bullying her. The memory suggests that Abandonment may underpin her Paranoid symptoms. Vulnerability to Harm is also present in that "...they always put me at the end of the line". There is an inevitability to being placed last.

The next memory is an example of the Abandonment predictor (from early memory of father) from a woman who was 18 years of age. She was also from the group with high levels of Paranoid symptoms.

'My family and I had just finished eating lunch and my father was watching the football. He was standing up, watching T.V. It was his way of displaying excitement that his team was playing.'

The clearest part of the memory is 'Watching my Dad watch T.V.'. The *strongest feeling* was **'not being able to communicate with my Dad.'** *If the memory could be changed* it would be to '**Get my Dad to pay more attention to me'.** The self-rating were: Joy 0; Powerlessness 4; Self-esteem 1; Care 0; Love 2; Self-alienation 3; Self-confidence 0; Loneliness 2; Safety 0; Anger 4; Clearness 4, Importance 4. There is more information gleaned from the strongest feeling in the memory and how this person would change this memory than from the memory on its own. She feels abandoned by her father and angry at him for not communicating with her.

4.2.3.13 DFA Results for Psychoticism symptoms

Table 4.17 displays the results for people with low and high levels of Psychoticism symptoms. Taken together the predictors seem somewhat contradictory and puzzling in that there is a low "Perception of the Self" and feelings of being 'Subjugated' by others but also there is a 'Perception that the Environment is Safe' and that others are benign. However, a 'Low Perception of Self' is clearly the strongest predictor. Seventy-four percent of people with high levels of self-reported Psychoticism symptoms were identified by a number of predictors. A low 'Perception of the Self' (lacking in mastery over the environment) from Memory of Father was the strongest predictor. 'Perception of Others' as being present and benign or need satisfiers and Subjugation were also significant predictors. The Subjugation schema usually involves the perception that one's own desires, opinions, and feelings are not valid or important to others.

People with these schemas tend to be compliant and to feel trapped. In contrast, a 'Perception of the Environment' as safe was also a predictor. There were also low levels or an absence of Defectiveness (Memory of Father) or Dependency (Memory of Mother).

Table 4.17

DFA Results for People in the Low and High Psychoticism Symptoms Groups

Predictors represented in Early Memories	Standardised Canonical Discriminant Function Coefficients	Percentage of Correct Cross Validation Group Classifications for Low and High Groups
		Psychoticism
		Low Group 73%
EM Father: Perception of Self	**-.99**	
EM 1: Perception of Others	**.61**	*n* = 37
EM 1: Subjugation	**.61**	
EM Father: Defectiveness/Shame	**-.54**	
EM Mother: Dependence/Incompetence	**-.51**	High Group 74%
EM Father: Perceptions of the Environment	**.49**	*n* = 43
		Psychoticism for Women
		Low Group 58%
EM Father: Perception of Self	**-.73**	*n* = 26
EM 1: Perception of Others	**.65**	
EM 1: Subjugation	**.44**	High Group 75%
		n = 36

N = 253

For Women, the set of predictors is much more straightforward. 'Perception of the Self' as lacking in mastery over the environment, Perception of Others as being present and benign (or need satisfiers) and Subjugation, correctly predicted 75 percent of Women with high levels of Psychotic symptoms.

The following example of the predictor a (Low) Perception of Self is from a man who was 18 years of age. He was in the group with high levels of self-reported Psychotic symptoms.

> 'When I was about seven years old, my father had offered to take me and my sisters to see a train go past at the station. When we were backing out the driveway the engine caught fire and **everyone jumped out of the car. I jumped through to the front, but my father had closed the door on me.** I eventually got out the back where I had started.
> The strongest feeling was '**fear of being trapped.**' If I could change the

memory '**I would have gotten out the back to start with**.' Self-ratings were: Powerlessness 3; Anxiety 4; **Shame 3**; Self-confidence 1; and **Loneliness 3**. This man had a low perception of himself in that he felt powerless, ashamed and alone. He also felt that he made the wrong decision and then had to retrace his steps. There is also a sense that his father had blocked off his escape route. The memory opens the way for exploring this man's feelings about his Psychoticism symptoms. Could it be that he feels as though his way gets blocked in life and he tends to make the wrong decision in a crisis? Does he feel as though this was an accident or that there was some sort of ulterior motive in his father blocking off his escape route? The memory allows for these sorts of questions to be asked and then explored in context of his psychoticism symptoms.

The next early childhood memory is from a man who was 18 years of age. This memory depicts the subjugation predictor from the first early childhood memory. He was also in the high Psychoticism symptoms group.

> 'I remember one time when I went to a shopping centre just a few days before Christmas when I was 5. **My parents forced me to sit on Santa's knee causing me to cry.** I was mainly upset because of the jumper I had on (Don't ask me why).

There are mixed messages in this memory. The first theme is of not wanting to sit on Santa's knee and being forced to by his parents (Subjugation). The second part is feeling upset because of the jumper he is wearing but not knowing why this should upset him. He suggested that the clearest part of the memory was 'Standing on the ground, feeling unhappy because of the jumper I was wearing.' The strongest feeling was 'Irritated, followed by anger and self-consciousness'. Powerlessness, shame and anger, all had self-ratings of 4 (extreme feelings). More questions need to be asked of this man to clarify what he was most angry about. The next section summarises the results for Study 2.

4.3   Summary of Results for Study 2

In Study 2, Maladaptive Schemas (Young, 1995), Object Relations (Perceptions of Self, Others and the Environment) and Affect (Affect Terms) that were represented in Early Childhood Memories, were found to be related to self-reported Psychological Symptoms (Derogatis, 1993). Firstly, evidence from Polyserial Correlations indicated that the subscales of the BSI (Derogatis, 1993) that reflect a range of self-reported Psychological Symptoms were positively and significantly related to psychological dysfunction represented in early childhood memories. The strength of these relations generally increased when men and women were examined separately.

Relationships were also found when analysing Boxplots. In particular, the 'Disconnection and Rejection' domain scores from the memories increased as Groups' self-reported Psychological Symptoms increased. This was also the trend with Negative Affect in the memories. In contrast, Positive Affect decreased as

Groups' self-reported Psychological Symptoms increased. In regard to Object

Relations, although there was a considerable amount of overlap across the groups,

there was a trend towards a decrease in the 'Perception of Others' and an increase

in the 'Perception of the Environment' as Unsafe as Groups' self-reported

Psychological Symptoms increased. These trends indicate that the unconscious

representations in the memories were congruent with levels of self-reported

psychological symptoms. It also indicates that underlying issues gleaned from the

memories can be related to conscious perceptions.

In relation to the research questions, Discriminant Function Analyses

(DFAs) revealed that a small number of significant predictors from the early

childhood memories were able to differentiate the groups with high levels self-

reported Psychological Symptoms from the groups with lower levels. An overall

view of these findings can be seen in Table 4.18.

As can be seen in Table 4.18 the predictors varied for each psychological

symptom. Abandonment (represented in memories of Father) and a lack of Self-

Control (from memories of Mother) even when the environment was perceived as

being safe, were the significant predictors for people in the group with high levels

of general distress (GSI; Derogatis, 1993). Abandonment from the 'Disconnection

and Rejection' domain was the most frequent significant predictor represented in

the memories, followed by Negative Affect and the Object Relations a low

'Perception of Self'. In contrast to Study 1, Object Relations (a low 'Perception of

Self' and a 'Perception of the Environment' as Unsafe) were found to be

significant predictors for most of the psychological symptoms.

Table 4.18

Schemas Represented in Memories that were Found to be Significant Predictors of

Psychological Symptoms

	Significant Predictors of Psychological Symptoms from Early Memories									
	AB	AS	ED	SUB	VH	InS	-Enviro	-SELF	NA	Low PA
Self-Reported Symptoms										
GSI	√				√					
Somatisation							√		√	
Obsessive-C.		√	√				√		√	
Interpersonal							√		√	√
Depression	√									
Anxiety	√							√		
Hostility		√						√	√	
Phobic Anx.						√		√		
Paranoid	√√			√						
Psychoticism				√				√		

N = 256 *Note:* AB = Abandonment; AS = Approval – Seeking; ED = Emotional Deprivation; SUB = Subjugation; VH = Vulnerability to Harm; InS = Insufficient Self-control; -Enviro = Perceiving the Environment as Unsafe; -Self = Negative Perception of the Self; NA = Negative Affect; Low PA = Low levels of Positive Affect; GSI = General Severity Index; Obsessive-C = Obsessive Compulsive; Interpersonal = Interpersonal Sensitivity; Phobic Anx = Phobic Anxiety.

The addition of Negative Affect (self-rated after the memories) for Study 2

was found to be a predictor in four of the psychological symptoms – Somatisation,

Obsessive-Compulsive, Interpersonal Sensitivity and Hostility. Self-rating

Negative Affect (after the memories) helped in relation to gauging levels of

Powerlessness; Anxiety; Shame; Self-alienation; Guilt; Loneliness; Inferiority and

Anger in the memories that may have otherwise been difficult to evaluate.

Young's (1995) maladaptive schemas were present as predictors of all the symptoms except Somatisation, Interpersonal Sensitivity, and Phobic Anxiety. Six out of 18 of the schemas were found to be significant predictors. These included - Abandonment, Insufficient Self-Control, Emotional deprivation, Approval-Seeking, Vulnerability to Harm, and Subjugation.

In general, these finding supports using representations of Maladaptive Schemas, Object Relations and Affect Terms when evaluating early childhood memories for unconscious influences on psychological health. The next chapter discusses the findings from Study 1 and 2 in terms of their theoretical implications followed by their practical applications.

CHAPTER 5   DISCUSSION

The discussion chapter considers the findings in relation to the aims and research questions that directed the two empirical studies. Overall, the results support the theoretical propositions of Beck (1996), Bruhn (1990b), Young et al. (2003), and Pacini and Epstein (1999). In both studies, maladaptive schemas that were considered to be represented unconsciously in early memories, were found to be closely linked to current self-reported psychological problems. In this respect, the findings have extended upon previous research that have shown Young's (1990, 1999) self-reported measures are related to psychological indices of health. In the present studies, Young's (1990) maladaptive schemas were also found to be represented outside of conscious awareness and were predominantly related to self-reported psychological measures of dysfunction.

The chapter begins with an overview of findings relating to the general and specific research questions that developed from each study. Following this, discussion of the principle schemas, object relations and affect found to be related to people's psychological functioning is undertaken. Links are made to previous research on these maladaptive schemas and childhood memories so as to propose their key role in the development of psychological dysfunction. Subsequent sections consider the significance for psychological well-being of particular combinations of maladaptive schemas and object relations and how the pattern differs somewhat for men and women. The discussion then turns to examining the apparent advantages of

accessing dysfunctional schemas using the early memory technique. This method may uncover unconscious schemas and allow them to be revealed, rather than relying on methods that only focus on conscious schemas. Finally, implications for therapy along with possible applications in educating parents and teachers, are presented. The chapter ends with methodological considerations, and directions for future research.

It is important to clarify that often throughout this chapter the term 'unconscious' is used. This term has had many meanings for many theorists (e.g., Adler, 1956; Bruhn, 1990b; Epstein, 1987; Freud, 1910/1957; Mayman, 1968). Here, it is used to denote information that is often outside of conscious awareness. This is not to say that some of the information revealed in early childhood memories is not conscious, but rather that these memories are more likely evidence of the existence of schemas that are not consciously held or articulated.

5.1   General Overview of the findings from Study 1 and 2

The findings from Study 1 and 2 addressed research questions both generally and specifically. In general, the two studies found that membership of people in different groups with a wide range, and differing levels, of self-reported maladaptive schemas [Study 1] and Psychological Symptoms [Study 2] was predicted by relatively few maladaptive schemas, object relations themes, and affect, represented in their early memories. This suggests that these few unconscious schemas are a potent source of influence on people's consciously reported maladaptive schemas and psychological well-being. Findings relating to the research questions are first briefly reviewed.

5.2   Study 1: Relating Unconscious Schemas to Self-report Schemas

The two questions that directed the empirical research for Study 1 were:

(1) 'Are unconscious maladaptive schemas and object relations that are represented in early childhood memories able to distinguish between people who currently reported experiencing high levels of maladaptive schemas from people who reported experiencing lower levels?'

(2) 'Which unconscious maladaptive schemas and object relations represented in early childhood memories best identified people who reported currently experiencing high levels of maladaptive schemas?'

In relation to the first question, the aim of the study was met. Maladaptive schemas and object relations represented unconsciously in the memories were able to differentiate people with high levels of self-reported maladaptive schemas from people with lower levels. In relation to the second question, the first key finding was that Young's (1990) maladaptive schemas from the 'Disconnection and Rejection' domain were the most prevalent schemas represented in memories that were significantly associated with high levels of self-reported maladaptive schemas. Given that the 'Disconnection and Rejection' domain did not predict membership of people in the middle group any better than chance, this suggests that schemas from this domain are more evident in people experiencing higher levels of self-reported maladaptive schemas than lower levels. People who self-reported high levels of

maladaptive schemas are also more likely to be distressed than those in the middle group who self-reported average levels of maladaptive schemas.

The second key finding was that, along with schemas from the 'Disconnection and Rejection' domain, the Object Relations themes of 'Perceiving the Environment as Unsafe', differentiated people with high levels of self-reported maladaptive schemas from those with lower levels. Experiencing the environment as primarily unsupportive or unsafe in conjunction with the maladaptive schemas of social isolation and mistrust depicts a bleak inner world that corresponds to psychological dysfunction.

In the second level of analysis, individual maladaptive schemas represented in the four early childhood memories were analysed instead of general schema domains as were analysed in the first analysis. The value of using specific schemas, rather than domains, is that a particular schema from a domain may be more influential than another schema from the same domain in identifying people with high levels of psychological symptoms.

The second level analysis confirmed the findings of the first analysis. Importantly, two of the three significant predictors (individual schemas) were again found from the 'Disconnection and Rejection' domain (Social Isolation and Mistrust Abuse). Along with the Object Relations variable – 'Perceiving the Environment to be Unsafe' – these more specific schemas of object relations predicted the group with high levels of self-reported maladaptive schemas and differentiated this group from the group with low levels. However, in contrast to the first analysis where the

predictor was the 'Disconnection and Rejection' domain from the second early childhood memory, in the second analysis, one of the maladaptive schemas (Mistrust Abuse), associated with the 'Disconnection and Rejection' domain, was from a different memory (Early Memory 1).

That these specific maladaptive schemas (Social Isolation & Mistrust/Abuse) were predictors that came from the one domain but from entirely different memories emphasises the potency of representations of schemas from the 'Disconnection and Rejection' domain. It reinforces the notion that themes of disconnection and rejection have a powerful underlying (unconscious) relationship with high levels of a range of self-reported schemas.

A number of significant polyserial correlations emerged for individual schemas identified within early childhood memories and self-reported maladaptive schemas. The strength of these relationships ranged from weak to moderate ($r = .20$ to $r = .50$). As with the results of Discriminant Function Analyses (DFAs), there was a preponderance of schemas from the 'Disconnection and Rejection' domain represented in the memories that were linked to high levels of self-reported maladaptive schemas. The pattern of polyserial correlations indicates that the maladaptive schemas represented in early childhood memories were often related to a wider range of dysfunctional schemas than only those that were self-reported. This reveals that a wider range of schemas are evident at an unconscious level to the conscious level and therefore reinforces the value of investigating unconscious information as well as self-report measures.

5.3 Study 2: Relating Unconscious Schemas to Self-Reported Psychological Symptoms

For study 2, the empirical investigation was focused on the following two specific research questions:

(1) Are unconscious maladaptive schemas, object relations and affect that are represented in early childhood memories able to distinguish between people who reported currently experiencing high levels of psychological symptoms from people who reported experiencing lower levels?

(2) Which unconscious maladaptive schemas, object relations and affect represented in early childhood memories best identified people who reported currently experiencing high levels of psychological symptoms?

In answer to the first question, the themes in the memories coded as indicators of unconscious maladaptive schemas, affect and representations of self, others and the environment in early childhood memories were able to distinguish people in the groups with high levels of self-reported distress from people with lower levels. In relation to the second question, some of Young's (1990) maladaptive schemas and Last and Bruhn's (1992) Object Relations categories were found to be important unconscious indicators of self-reported Psychological Symptoms as measured by the Brief Symptom Inventory (BSI; Derogatis, 1993). Hermans and Hermans-Jansen (1995) Affect domains were also found to be predictors of some psychological symptoms. The predictors were able to differentiate people from different groups at a greater level than chance.

Basically, five out of a possible 18 of Young's (1990) maladaptive schemas represented in early childhood memories emerged as significant predictors of psychological symptoms in Study 2. Two of these five predictors were from Young's (1995) 'Disconnection and Rejection' domain. Abandonment was the maladaptive schema most represented (seven times) as a significant predictor of people with high levels of psychological symptoms. This was followed by Approval–Seeking which was represented (three times) as a predictor. Insufficient Self-Control, Emotional Deprivation and Subjugation, were also significant predictors of people with high levels of self-reported General Distress, Obsessive-Compulsive, and Psychoticism symptoms.

There were also a number of significant predictors that stemmed from object relations themes in the early childhood memories. Negative Perceptions of Self was the most frequently represented (five times) in the memories of people with high levels of self-reported Anxiety, Hostility, Phobic Anxiety, and Psychoticism symptoms. This was followed by Negative Perception of the Environment (four times), which predicted people with high levels of Obsessive-Compulsive, Interpersonal Sensitivity, and Phobic Anxiety symptoms.

High levels of self-rated Negative Affect were a significant predictor (four times) of people with high levels of Somatisation, Interpersonal Sensitivity, Obsessive-Compulsive, and Hostility symptoms. Low levels of self-rated Positive Affect were a predictor (once) of people with high levels of Interpersonal Sensitivity symptoms.

As in Study 1, the polyserial correlations revealed that schemas from the 'Disconnection and Rejection' domain had the greatest number of significant relationships with a range of self-reported psychological symptoms. From this domain, Abandonment was the most represented. These relationships ranged in strength up to $r = .35$. In general, the correlation results indicate that Young's (1990) maladaptive schemas from the 'Disconnection and Rejection' domain have an underlying link with a range of psychological symptoms.

When the sample was split into men and women and analysed separately, the strength of the relationships tended to increase, with a number of relationship as high as $r = .50$. This increase in strength suggests that men and women face different underlying issues that were often obscured when men and women were combined in the same analyses. These gender differences were also noticeable in the area of object relations. 'Perception of Self' was a much greater issue for women than men and conversely the 'Perception of the Environment' as unsafe was a greater issue for men than women. These relationships were as strong as $r = .47$.

In the following sections, the results are discussed in more depth in terms of the significant predictors (from the DFAs) that were found in both studies. These begin with Young's Maladaptive Schemas followed by Object Relations and Affect.

5.4   The findings in Relation to Young's (1995) Maladaptive Schemas

This section begins with an overview of what was found in relation to Young's (1990) maladaptive schemas. It considers each of Young's five maladaptive schemas (Abandonment, Approval Seeking, Insufficient Self-Control, Emotional

Deprivation and Vulnerability to Harm) found in the early childhood memories in the order that they were most represented as predictors of consciously reported maladaptive schemas and psychological symptoms. These schemas were predictors of high levels of self-reported symptoms of: General Distress, Obsessive-Compulsive, Depression, Anxiety, Hostility, Paranoid and Psychoticism in Study 2.

Given the high proportion of unconscious predictors found in early memories from both studies were from Young's (1990) 'Disconnection and Rejection' domain, these results provide empirical support for Young et al.'s (2003) claim that "Patients with schemas in the 'Disconnection and Rejection' domain are often the most damaged" (p. 13). Although Young et al. (2003) claimed that these schemas were highly represented in people with severe psychological difficulties, they were referring to their clinical clients. The results from the present studies extend this claim in that schemas from this domain were also found as predictors of people from non-clinical community samples with high levels of self-reported maladaptive schemas and symptoms of general distress.

The schemas from the 'Disconnect and Rejection' domain are all related to a lack of familial care and bonding and therefore, finding these schemas as predictors in the present study, reinforces the argument that they have a maladaptive influence in the developing person. The results from both studies suggest that a lack of perceived care and connection by caregivers can have far reaching negative consequences such as the development of psychological symptoms. This contention was also proffered by Bowlby (1969) and Ainsworth (1968), as they believed the

mother, in particular, was instrumental in providing either a secure or an insecure
base for the child. An insecure base could result in the child becoming distressed,
which may set dysfunctional patterns of relating that extended into adulthood.

Another important finding in the present studies that extend upon past
research into Young's (1990) maladaptive schemas (e.g., Lee et al., 1999; Petrocelli
et al., 2001; Schmidt et al., 1995), was that maladaptive schemas represented at an
unconscious level in memories were linked to self-reported maladaptive schemas.
Additionally, these schemas were related to a wide range of self-reported ones.
Support for investigating unconscious representations of schemas was also found in
Study 2. The findings extended upon previous research into general distress,
depression and anxiety that found links with Young's (1990) self-reported
maladaptive schemas, by also identifying relationships with unconscious
representations of Young's maladaptive schemas. Consequently, the findings in this
thesis broaden support for the employment of investigating Young's (1995)
maladaptive schemas at a deeper level to enable a greater understanding of people's
psychological health than is revealed from using self-report measures exclusively.
The maladaptive schemas that were found as significant predictors of Psychological
Symptoms are now discussed in turn.

5.4.1. *Abandonment*

Abandonment themes in early memories were most represented as a predictor
of groups with high levels of General Distress, Depression, Anxiety, and Paranoid
Symptoms. This implies that abandonment is a major issue that underlies a number of

psychological symptoms. In many ways perceived abandonment is one of the most obvious components of disconnection and rejection from Young's (1999) 'Disconnection and Rejection' domain. Some of the other schemas associated with this domain such as emotional deprivation or social isolation can still suggest the presence of the caregiver, albeit in a dysfunctional way. However, Abandonment can mostly be construed as a powerful experience of aloneness and unambiguous rejection.

In particular, Abandonment in memories of Father was one of the main indicators of the group with high levels of General Distress. According to Young et al. (2003), people with schemas such as Abandonment have had traumatic childhoods that include an expectation that people close to them will leave. Abandonment may take the form of someone close becoming sick and dying, or leaving them for someone else. Therefore, in adulthood, people with this schema live with an anxiety that someone is going to leave them or that others are emotionally undependable.

In a similar vein, Shedler et al. (1993) found that the early childhood memories of people with high levels of physiological stress depicted parents as being unavailable as a source of comfort or security. Therefore, finding abandonment themes associated with memories of father in the present study gives added support to the negative implications of unsupportive parents. Their unavailability (in this case the father) can have a lasting influence on psychological symptoms.

A further consideration is the different consequences that may arise from a perceived abandonment by the father when compared with a mother's abandonment

(Van Ijzendoorn & Bakermans-Kranenburg, 1996). It is possible that a lack of emotional interaction or bonding with the father may produce different outcomes than perceived abandonment by the mother. Paquette (2004) suggests that fathers play an important role in the development of their children's ability to be brave in unfamiliar situations and to stand up for themselves. He postulates that this dynamic is especially so when children emotionally bond with their father. In contrast, mothers tend to be calming and comforting, especially in times of stress. The results from the present study indicate that when children perceive that their father has abandoned them, their distress may stem from a fear of the unknown as they have not 'practiced' coping with new challenges with their father's support.

Representations of Abandonment (in Early Memory 2) were one of the main predictors of high levels of self-reported Depression that identified 90% of people in the high Depression Group. The following example is from a woman aged 19 years of age. This person had high levels of self-reported Depression, Anxiety and Hostility.

> "When I was about 4 or 5 years of age, I went out shopping with my mother. She had a motorbike. As we were finished the shopping, ***she started the bike and left without noticing that I was not on***. Fortunately, she did not go very far and soon must have realised that she had left me behind." The clearest part of the memory was ***"Being left behind, helpless."*** The strongest feeling was ***"Loneliness, scared."***

This memory clearly depicts this person as feeling abandoned by her mother and she clearly states that she felt alone and scared. This woman begins to rationalise

in this memory with *"Fortunately, she did not go very far and soon must have realised that she had left me behind."* Yet, it is the feeling of helplessness, loneliness and being scared that reveal more of what Epstein (1994) terms, the experiential self's perception of the situation and reveals more of the essence of her underlying feelings that relate to her depression – her fear of being abandoned.

That Abandonment schemas represented in the memories were related to Depression concurs with the findings of Glaser et al. (2002) who found that Young's (1990) self-report measures of Abandonment schemas were significant predictors of the Depression subscale of the BSI (Derogatis, 1993). The present result highlights the pervasive influence of Abandonment schemas at the unconscious level and provides an enriched contextualised account of this core schema.

Closer to the present study, Acklin et al. (1989) also found that themes of rejection or deprivation represented in early childhood memories were positively related to Depression. In Acklin et al.'s study, deprivation included being deserted, separated, threatened, or abused, which captures elements of Young's (1990) more descriptive 'Disconnection and Rejection' domain. Acklin et al.'s (1989) findings are consistent with those of the present research, however in the present study, representations of Abandonment in particular were the main predictors of high levels of self-reported Depression symptoms. Therefore, these findings suggest that at an unconscious level, people who are depressed have deep-seated feelings of abandonment that may not always be revealed, or not as strongly represented in such a personally relevant way by self-report measures (e.g., Shah & Waller, 2000).

Themes of Abandonment (Second Memory) were one of the main predictors of people with high levels of self-reported Anxiety. This result suggests that at an unconscious level, the feeling of being abandoned in combination with a sense of having no control over a situation in the context of Father, may underlie anxiety. The association of abandonment with high levels of anxiety supports an aspect of Epstein and Pacini's (1999) theory. They suggest that relatedness or relationships with other people are basic needs and if these needs are not adequately met then maladaptive schemas in the experiential system affect health and behaviour without conscious awareness. In this case, people who recalled a lack of connection with significant others in the form of abandonment (in the experiential system), also exhibited anxiety symptoms (adverse health).

That Abandonment themes were associated with self-reported Anxiety and Depression symptoms may reflect the close relationship between the two disorders (Barlow, 2000; Rivas-Vazquez, Saffa-Biller, Ruiz & Blais, Rivas-Vazquez, 2004; Watson & Kendall, 1989). Barlow (2000) suggested that almost all people who are depressed are also anxious and there are symptoms that are shared by people suffering from both disorders that include sleep disturbance, fatigue, irritability and worry. This symptom overlap appears to be particularly evident in non-clinical groups where people report feeling depressed and anxious (Rivas-Vazquez et al., 2004). It is possible that abandonment is common to both conditions because people are anxious that they will be abandoned at any time and depressed (and likely angry) at this perceived reality.

Abandonment was revealed twice as a predictor (in EM2 & EM Father) that identified people with high levels of self-reported Paranoid Ideation symptoms. The emergence of Abandonment in two of the memories suggests that a greater magnitude of abandonment is associated with people with high levels of these symptoms than if Abandonment was only found as a predictor in one early childhood memory. Young et al. (2003) suggest that people with the Abandonment schema live in constant fear and are always on guard against the loss of someone as there has been a pattern throughout their life of people, especially caregivers, being undependable and leaving them from an early age.

Garety, Kuipers, Fowler, Freeman and Bebbington (2001) have a similar view to Young et al. (2003) about the etiology of beliefs that the self is vulnerable to threat or danger from other people. They suggest that adverse experiences in childhood, such as social isolation and childhood loss and trauma are associated with symptoms such as paranoid ideation. Therefore, it is possible that in the present study, a high level of fear of abandonment from significant others at an unconscious level may well have lead to symptoms of Paranoid Ideation such as suspiciousness and a lack of trust that other people will not abandon them.

In summary, Abandonment was found to be the most prolific predictor of psychological symptoms. This is an important finding as it suggests that when abandonment is very prominent at an unconscious level, people may become generally distressed, anxious and depressed. They may also loose trust in others, become suspicious and even display paranoid symptoms. Abandonment's pervasive

influence is evidenced by its prolific presence as a predictor. This finding suggests

that it is a crucial component to the development of many psychological symptoms.

5.4.2 Approval-Seeking

After Abandonment, Approval Seeking from the First Early Memory was the

second most prolific of the maladaptive schemas represented in the early childhood

memories that related to psychological symptoms. These included self-reported

Obsessive-Compulsive and Hostility symptoms. Approval Seeking represents an

excessive focus on what is needed to gain approval and acceptance from other people

(Young et al., 2003). Young (1995) has found that people with Approval Seeking

schemas come from families where their parents exhibit a conditional acceptance of

their children. For example, the children get a sense of being loved if they fulfill some

external requirement of their parents. To strive towards gaining acceptance from their

parents, children suppress what they perceive as negative aspects of themselves in

order to qualify for their parent's love, approval and attention.

As Approval Seeking was one of the main predictors of high levels of

Obsessive-Compulsive symptoms, in light of Young's (1995) experience, people with

high levels of Obsessive-Compulsive symptoms may be motivated by an unconscious

perception that love and acceptance are conditional as this has been the pattern of

relationships that has been ingrained into them from an early age. Therefore, they

strive to impress other people and consequently be accepted by them, which to them

may equate to being loved. It is possible that being motivated by external displays of

acceptance and constantly striving for approval is a cognitive strain for these people, which results in Obsessive-Compulsive symptoms.

A study by Bhar and Kyrios (1999) supports this view. They found in a non-clinical sample that people with Obsessive-Compulsive symptoms over-emphasised the importance of social approval. Social approval was also a way of identifying their self-worth. Guidano and Liotti's (1983) findings from clinical case studies also concur with this line of reasoning. They found that people with obsessive-compulsive symptoms have an inner need to be perfect. Additionally, it was also common that parents of the person with these symptoms were unaffectionate and hostile towards their child. Consequently, in relation to the results of the present study, people with high levels of Obsessive-Compulsive symptoms appear to have an inner need for approval and recognition that has not been adequately met from an early age. Therefore, these people strive toward perfection to gain the social approval that they perceive is lacking. The following memory is an example of a man who was 18 years of age and self-reported high levels of Obsessive-Compulsive symptoms.

> "I came home from school and told my mother that ten plus ten equals twenty, but she was not impressed". The clearest part of the memory was "Mum's response." The strongest feeling was ***"disappointment."***

This person thought that if the memory could be changed it would be that *"Mum was happy."* This memory illustrates that this person was seeking approval and recognition from his mother for being so clever and she did not give him this acknowledgement. There are also elements of emotional deprivation here. This

person also indicated that they felt a moderate level of anger associated with the memory.

In contrast to the present results, Young et al. (2003) found that people diagnosed with Obsessive-Compulsive disorder had both the Emotional Inhibition and Unrelenting Standards schemas. These schemas were not found for people with high levels of Obsessive-Compulsive symptoms in the present study. This may be for a number of reasons.

First, Emotional Inhibition and Unrelenting Standards may relate more to symptoms of Obsessive-Compulsive disorder on a more conscious level, whereas Approval–Seeking was found at a deeper, more unconscious level in the early memories. Second, people in the present study did not fit the criteria for a clinical diagnosis of Obsessive-Compulsive disorder. Third, given that the present study involved a student sample, it is possible that the questions from the Obsessive – Compulsive sub-scale were answered in the context of study workloads and assignments rather than non-study related day-to-day activities. For example, items from the subscale include 'Trouble remembering things', 'Feeling blocked in getting things done', 'Difficulty making decisions', 'Your mind going blank', 'Trouble concentrating' and 'Having to check and double-check what you do'. These items can be interpreted in relation to study deadlines, assignments and understanding new concepts. Therefore, the results may indicate that on an unconscious level, these students are motivated by wanting to gain acceptance and recognition which creates cognitive confusion which is reflected in the endorsement of the self-report items in

this sub-scale. This suggests that people with high levels of Obsessive – Compulsive symptoms, in this case suffering from cognitive confusion, have had the experience of not being accepted unconditionally, or at least perceive this to be the case on a deep level.

Approval-Seeking was also a predictor of people with high levels of self-reported Hostility symptoms. Young et al. (2003) believe that people with the Approval-Seeking schema often have a suppressed true self. This suppression occurs because these people strive for acceptance and outward approval from others rather than developing their natural preferences. In relation to the results, hostility for these people may stem in part from anger in response to their perception that their childhood that was lost or supplanted by seeking approval from demanding parents rather than being true to their real feelings or 'true self'.

According to Raskin and Rogers (1995), the perception of self stems from self-evaluations and from evaluations of significant others, which are often interpreted as coming from the self. Psychological maladjustment occurs when external evaluations such as 'to be accepted by my parents I must achieve well at school' is at odds with the 'true self' that values and expects to be accepted unconditionally. In accordance with the present findings, at some point this suppression of the 'true self' and the substitution of seeking approval or recognition may lead to feelings of hostility.

5.4.3   *Insufficient Self - Control/Self-Discipline*

Insufficient Self-Control in early memories of mother was one of the main predictors of people with high levels of General Distress. As Insufficient Self-Control has a predictive relationship with distress, this suggests that at a core level, there is a perception of one's emotions and impulses as being out of control. This underlying sense is either instrumental to, or concomitant with the distress.

The development of Insufficient Self-Control may stem from at least two mechanisms – over-controlling parents or under-controlling parents. With over-controlling parents, the child may perceive that they lack self-control. The parents are over-involved in the child's affairs and the child feels constantly judged and inadequate (Buri, Louiselle, Misukanis & Mueller, 1988). In the following case the mother is trying to control the child's behaviour and the child is unable to control her urges. This memory is from a woman who was 27 years old.

> "My mother told me not to cook or bake anything while she was sleeping. She worked nightshift and I was on holidays. *I could not resist however,* and decided to make donuts. I prepared the batter before realising that I had no idea how to cook them. I took the batter outside and poured it down the drain-pipe to hide the evidence." The clearest part of the memory was "pouring the batter down the drain-pipe. Mother found the evidence."
> The strongest feeling was embarrassment.

This memory clearly depicts not being able to control the urge to cook donuts even though her mother specifically asked her not to cook while she was asleep. She was embarrassed at being found out and not being able to control her desires. This

uncontrollable urge may well have been linked with her distress. The memory may also indicate that this woman cannot attain her mother's standards and feels guilty when she does not live up to them. This person may also feel cross at being abandoned or neglected by her mother and retaliates by being disobedient. She then feels guilty about her actions.

The second group of under-controlling parents tend to lack clear boundaries, and are often absent. Their children are frequently left to their own devices to get things done. This can lead to feelings of distress in the child due to a lack of containment and supervision by an adult (Steinberg, Lamborn, Darling, & Mounts, 1994). In Young's model, people experiencing insufficient self-control or self-discipline due to absent parents, often feel as though it is out of their control to restrain their emotions and impulses. They often try to avoid discomfort, conflict and responsibility. Additionally, they have a low threshold for the delay of gratification, become bored easily, and find it difficult to be patient (Young et al., 2003).

Some memories demonstrated an absence of self-control by the mother. These mothers did not have clear boundaries and were not able to control their emotions in relation to their children. This is illustrated in the following memory from a woman who was 38 years old.

> "**My mother forgot to pick me up** from school and on the way home I was crying and wet my pants. My legs stopped working and a man from down the street carried me home. **My mother laughed at me for putting on a 'performance'**. I felt silly and sad."

The mother lacks self-control and self-discipline (under-controlling parent) in this memory as she just laughs at her daughter's distress. Another indicator that the mother lacks self-discipline is that she did not organise to pick up her daughter from school. The memory also reflects the child's Insufficient Self-Control in that she wet herself and was not able to walk. As an adult, this person may feel that significant others are unreliable and lack boundaries and this in turn makes her feel distressed. When she feels abandoned and distressed, significant others do not meet her needs and think that she is pretending she is distressed, in order to attract attention.

Bruhn (1990b) suggests that early memories of mother may also indicate feelings about women in general. Therefore, the memory may signify that women are perceived as not having sufficient self-control (of their emotions or impulses) and this leads to overt feelings of general distress as anything untoward may happen. For instance, as an adult a man may feel distressed in his relationship with his female partner if he perceives that she is over emotional at times and he may be overwhelmed by her lack of control.

5.4.4 *Emotional Deprivation*

Emotional Deprivation from the Second Memory was one of the main predictors for people with high levels of self-reported Obsessive-Compulsive symptoms. According to Young (1990), Emotional Deprivation is evidenced when a person expects that others will not emotionally support him or her. The person was, or expects to be, deprived of nurturance, empathy and protection in the form of warmth, understanding, acceptance or guidance. This lack is primarily from the

parents but can also be from significant others. That Emotional Deprivation emerged as one of the main predictors of Obsessive-Compulsive symptoms, together with Approval-Seeking, strengthens Young et al.'s (2003) claim that Emotional Deprivation is often concomitant with Approval-Seeking in their clinical clients. Young et al. indicated that Approval-Seeking can be a product of Emotional Deprivation. For example, people who have been emotionally deprived are likely to compensate for this lack of warmth by striving to seek approval and recognition from others as a substitute for love.

Importantly, as Emotional Deprivation was the stronger of the two of Young's (1990) predictors of Obsessive-Compulsive symptoms in the memories, one interpretation of the results is that warmth, support or attention is not expected from significant others because it was not supplied in the past. Deprivation in the memories was related to self-reports of going blank, having trouble concentrating, and being ambivalent. These reactions in response to stressful situations can occur where the person does not feel they can turn to anyone for help. At a core level, people with high levels of Obsessive–Compulsive symptoms also have a need to have other people's approval and recognition. They do not find it easy to ask for assistance, which they perceive may be seen by others as symbol of their weakness, or as bringing disapproval from others (Nemiah & Uhde, 1989). The following memory is an example of Emotional Deprivation from a woman who was 20 years of age with high levels of Obsessive Compulsive symptoms.

"When my brother had a severe asthma attack and was put into hospital. ***He was receiving all the attention.*** I was worried about him but at the same time ***I was angry towards him***. After a couple of weeks of feeling this way, I wrote a note to my parents saying that '***it was unfair that he gets all the attention'. I was sort of mocked for this by my parents and was expected to act more grown up.***" The clearest part of the memory was "putting the note on my door and slamming it and crying." The strongest feeling was "***Loneliness and abandonment – less attention from my parents***".

This memory indicates the lack of understanding of this person's feelings by her parents. She needs to write a note for them to communicate that she is emotionally hurting and even then they mock her attempt at trying to express her feelings. Her self-reported Obsessive-Compulsive symptoms that incorporate incessant thinking may be related to wanting to be acknowledged as being important or worthy of attention. Even giving explicit signs to people does not seem to make a difference. Her parents have expectations of her that only add to her deprivation. She wants them to care for and nurture her and not place her second to others' needs.

5.4.5 *Vulnerability to Harm*

Vulnerability to Harm was found to be a predictor of women with high levels of Paranoid symptoms. This schema is related to feelings of impending doom or catastrophe that may strike at any time and seems beyond the person's ability to control. Anxiety is associated with this schema, and consequently, people cope by avoidance such as avoiding certain situations. They can also cope by over compensating, such as placing restrictions on their activities. In an extreme, where there are high levels of the schema and its associated anxiety, people can perform

compulsive rituals (Young et al., 2003). As Vulnerability to Harm was found to be represented in the memory, this suggests that at an unconscious level, women with high levels of paranoid symptoms are anxious that something dreadful is imminent in their lives. This may explain the association with paranoid symptoms. The following memory is an example of the Vulnerability to Harm predictor from a woman who was 19 years of age and who had high levels of Paranoid symptoms.

> "I was saying my prayers and I ***always*** used to light a little candle and hold it. I decided to set a piece of paper alight and then blow it out. I threw it on my bed and walked away. I was sitting on my aunt's lap and when I turned around my bed was on fire. Mum grabbed a bucket of water and threw it on the bed and I ran outside screaming and shouting."
> ***The strongest feeling was: fear and dying.***

This memory illustrates the Vulnerability to Harm and the negative Affect in the memory. Interestingly, it also includes a ritual that Young et al. (2003) included in their presentation of this schema. However, even going through her regular ritual was not enough to thwart disaster. The memory also alludes to this woman's fear of dying that may underpin her symptoms.

In summary, the present results support Young et al.'s (2003) assertion that maladaptive schemas, and especially those from the Disconnection and Rejection domain, are related to self-reported psychological dysfunction. Young et al.'s theory of the development of these maladaptive schemas is consistent with Object Relations theories. The next section discusses Object relations that were found represented in early memories that were significant predictors of Psychological Symptoms.

5.5   Object Relations Themes That Predicted Psychological Symptoms

A number of significant predictors of Psychological Symptoms stemmed from object relations themes in the early childhood memories. In particular, a 'Negative Perception of Self' and a 'Perception of the Environment' as unsafe were represented the most. That these aspects of object relations were associated with a range of psychological symptoms concurs with attachment theory. Bowlby (1969, 1973) indicated that people develop certain relationship patterns that are based on the dynamics of their first relationship, usually with their mother. For instance, grave maladjustment can occur when there are developmental failures surrounding a mother's ability to nurture her child emotionally and or physically. This neglect often results in the child experiencing and internalising deprivation and mistrust of people (Bolger, Patterson & Kupersmidt, 1998). Also, separating from the child by abandoning him or her, or humiliating the child, rather than developing the child's self-esteem, can make the child internalise a self that is perceived as defective. These experiences the child endures can then lead to psychological maladjustment throughout the lifespan (Rohner, 1975a). The results from the present studies indicate that the internal relational models that depict the self as ineffective and acted upon by others (Study 2) together with an unsafe environment (Study 1 & 2) are linked with psychological dysfunction.

As there were a number of symptoms predicted by object relations themes, the following sub-sections are organised according to Last and Bruhn's (1992) model of Object Relations that were most frequently found as significant predictors of

Psychological Symptoms. Individual Distinctiveness (the clarity of the character in the memory) was also one of the predictors in four symptoms. This predictor emphasises that characters in the memory are more distinct in relation to particular symptoms.

5.5.1   A low Perception of Self

Low perceptions of self were found to be one of the predictors of people with high levels of self-reported Anxiety, Psychoticism, Phobic Anxiety and Hostility symptoms and was associated with Memory of Father in each case. Low perceptions of self capture a view of the self as having no mastery over the environment. The person is represented as primarily passive. He or she is a follower, an observer, a recipient, or a victim (Last & Bruhn, 1992).

A low perception of self was a predictor of Anxiety along with Abandonment. In combination, the two predictors indicate that people in the group with high levels of self-reported anxiety have a low perception of their ability to influence or act on their environment (in context with memories of Father) and that they feel abandoned by others, often their father. It is understandable that a person experiencing a lack of mastery over a situation, together with feelings of having been abandoned, would feel anxious, especially if these feelings were pervasive and at a deep unconscious level. That a low perception of self and a lack of mastery in relation to memories of father was a significant predictor of Anxiety symptoms, further supports Paquette's (2004) theory that children who lack an emotional bonding with their father tend to be less confident about mastering their environment.

The following memory is an example of a person who reported high levels of anxiety symptoms and had themes of abandonment and a low perception of self in the memory.

> 'I wanted to stay at friends of my parents who had a shop. Mum and Dad agreed, however the minute that they left I burst into tears and could not be consoled. I didn't really stop crying the whole time. I ended up vomiting, wetting myself and every other horrible thing that could happen.'

This memory depicts elements of panic as the parents left, and terror and apprehension at being left alone. These are all symptoms of anxiety. The memory also has elements of abandonment and a low perception of self - lack of mastery over the situation. According to Bruhn (1990), early childhood memories hold clues as to the person's current difficulties and major concerns. As this person was currently reporting a high level of anxiety, these unconscious components may underlie this person's psychological symptoms. Perhaps this person feels anxious going into new social situations because they feel as though they will be abandoned and overwhelmed by a lack of support from significant others.

5.5.2 *Perception of the Environment as Unsafe*

The Perception that the Environment was unsafe was a significant predictor of people with high levels of self-reported maladaptive schemas in Study 1. It was also found as a main predictor of people with high levels of Interpersonal Sensitivity in Study 2. According to Derogatis (1993), Interpersonal Sensitivity relates to feelings of personal inadequacy, inferiority and self-doubt, especially when evaluating oneself

against others. It also encompasses being uncomfortable when engaged in interpersonal interactions. The following memory is an example from a woman who was 18 years of age. She had high levels of self-reported Interpersonal Sensitivity symptoms and representations of the environment as unsafe in the memory.

> "When we were collecting wood on the trailer down the back of our house. We had filled the trailer and I said something to my younger brother that made him laugh and fall off the trailer and underneath it. As my dad ran over his head my older brother yelled stop which he did right on top of my younger brother's head. My father jumped off the trailer and after swearing a lot he got back into the car and drove over the rest of my brother's head. He then took my brother to hospital." The strongest feeling was "being scared, I thought my brother was going to die."

This memory depicts experiencing the environment as unsafe. The results suggest that underlying Interpersonal Sensitivity symptoms at a core or unconscious level are feelings that the social environment is unsupportive and potentially threatening. These elements appear to relate to conscious perceptions of inadequacy, inferiority or self-doubt, especially in social situations that characterise Interpersonal Sensitivity.

The predictors for Phobic Anxiety were Perceptions of the Environment as Unsafe (First Early Childhood Memory) and Negative Perceptions of Self (Early Childhood Memory of Father). Unlike the other psychological symptoms, Young's (1995) maladaptive schemas were not found as predictors. Derogatis (1993) defines phobic anxiety as a persistent fear response that is usually irrational. He indicates that

this symptom often leads to avoidance or escape behaviours. Derogatis additionally suggests that there is an associated lack of inner resources to cope with these feelings. The results imply that Phobic anxiety may stem from, or be associated with, a pervasive feeling of a threatening, or unsafe and unsupportive world. The following memory is an example.

> 'I was about 4 and I was walking across a long log from one side of a big stream to the other. When I was almost at the other side I lost my balance and fell into the stream and hit my head. The log was really narrow and slippery and I had never wanted to cross over it before because I had been too scared of falling. My dad pulled me out of the stream and my sister was laughing.'

Interestingly, a small number of the memories for Phobic Anxiety had themes of being afraid of falling into water and being laughed at or humiliated. Some of the recollections also included head injuries such as in the example above. Bruhn (1995) found that memories involving injuries are often related to psychopathology and loss. He found that injury memories were more common in clinical samples than non-clinical ones. He suggested that each memory involving injury needed to be analysed in context with the characters and situation in the memory.

5.5.3   *Perception of Others*

In the case of 'Perception of Others', this was found as one of the predictors of Psychoticism symptoms. However, it was positively endorsed (others are benign or need satisfiers) rather than negatively endorsed (others represented as not present, or present as aggressive characters) in the memory. In examining this predictor, it is important to keep in mind that Derogatis (1993) developed the Psychoticism

symptoms subscale to identify people that ranged from mild interpersonal alienation to dramatic psychosis, depending on the sample. Given that the sample for the present study consists of university students rather than a clinical sample, the present results suggest that an inflated perception of others underlies symptoms of interpersonal alienation rather than psychosis. Therefore, an interpretation of this predictor indicates that there may be a tendency for people to perceive others as better than themselves if they report experiencing interpersonal alienation. It can also be argued that interpersonal alienation has complex roots and as Psychoticism symptoms had the most predictors this is discussed further in section 5.7.2 which addresses the development of profiles from a number of predictors.

In general, the inclusion of Object Relations themes often increased the accuracy of predicting people with high levels of self-reported maladaptive schemas and psychological symptoms. For instance, in the case of people with high levels of maladaptive schemas, if the object relations predictor of Perceiving the environment as unsafe was omitted then the correct allocation to the group with high levels of self-reported maladaptive schemas diminished.

In summary, finding a number of Object Relations predictors in the early memories suggests that at a core or unconscious level, the perception of self, others and the environment, are important components to investigate. In particular, object relations themes were related to negative psychological symptoms, or psychological health. This finding supports Epstein and Pacini's (1999) claim that people have basic needs such as maintaining relatedness or relationships with other people. They

suggest that if needs such as these are not met, then maladaptive schemas develop and psychological dysfunction ensues.

It is apparent from the results that Young's (1995) maladaptive schemas add more information to a profile of unconscious predictors than object relations on their own. Both aspects, maladaptive schemas and object relations factors, broadened the possible reasons for, or indicators of, psychological symptoms. Negative and Positive Affect also contribute additional information that helps to understand a person's psychological profile. The next section discusses the findings from Study 2 in relation to affect.

5.6   The Findings in Relation to Affect as a Predictor of Psychological Symptoms

A high level of self-rated Negative Affect was a significant predictor of people with high levels of Somatisation, Interpersonal Sensitivity, Obsessive-Compulsive, and Hostility symptoms. A Low level of self-rated Positive Affect was a predictor of people with high levels of Interpersonal Sensitivity symptoms. As with Object Relations, Affect was found to predict a number of Psychological Symptoms.

Negative and Positive Affect terms (Hermans & Hermans-Jansen, 1995) were introduced into the coding scheme for Study 2 to enable participants to self-rate affect in their early childhood memories. Hermans and Hermans-Jansen found that self-rating memories in this way revealed specific emotions that may have remained undetected if the memories were analysed solely by a third party. Thus, self-rating affect is an extra mechanism for indicating emotionally meaningful aspects about a

memory. Furthermore, Epstein (1998) regards affect that is found in memories as an important indicator of affect that is in the experiential system. He believes a simultaneous pairing with affect stored from similar experiences in the experiential system can intensify affect experienced in the present.

In the current study, high levels of Negative Affect and low levels of Positive Affect endorsed from the memories were found to be predictors of high levels of self-reported psychological symptoms. This finding supports Epstein's (1998) notions and underscores a major argument of this thesis - that affect which is intrinsically related to perceptions outside of conscious awareness (within early memories) is an indicator of psychological dysfunction (e.g., Beck & Freeman, 1990; Bruhn, 1992b; Epstein, 1994; Liese & Franz, 1997; Liotti, 1989). In particular, Negative Affect associated with the content of the memories was found to be one of the main predictors in four types of psychological symptoms – Somatisation, Obsessive-Compulsive, Interpersonal Sensitivity, Hostility, and Paranoid (women only). These symptoms and their predictors are now discussed in turn.

Negative Affect ratings from the first early memory was the principle predictor of people with high levels of self-reported Somatisation symptoms. Derogatis (1993) contends that Somatisation symptoms are related to distress that is associated with the perception of bodily problems as well as somatic equivalents of anxiety. That Negative Affect was endorsed in the early memories of these people suggests that at a deep level, feelings such as Powerlessness, Anxiety, Shame, Self-

alienation, Guilt, Loneliness, Inferiority and Anger, may underlie their Somatic symptoms.

Research findings (e.g., Crittenden, 1994; Slade & Aber, 1992) indicate that when caregiver's expression and communication of emotion is deficient, then children become insecurely attached and lack emotional expression themselves. This, in turn can result in somatic disorders (e.g., Lesser, 1981; Sifneos, Apfel-Savitz & Frankel, 1977). As such, finding Negative Affect associated with the memories of people with high levels of Somatisation symptoms may also reflect difficulties in expressing underlying emotion, which in turn manifests in somatic symptoms.

People with high levels of Obsessive-Compulsive symptoms were differentiated from people with lower levels by Negative affect in the first early memory. Also, as with Somatisation symptoms, Negative Affect was a stronger predictor of Obsessive-Compulsive symptoms when men were included in the analysis. As men tend to be less emotionally expressive when compared to women (Weinberg, Tronick Cohn & Olson, 1999), this again may indicate the influence of unexpressed emotion.

Finding Negative Affect to be a predictor of Obsessive-Compulsive symptoms fits with the view that feelings such as anxiety are intrinsically related to non-clinical levels of obsessive-compulsive symptoms (Frost, Sher & Geen, 1986). The findings in relation to Somatisation and Obsessive–Compulsive symptoms also concur with Saunders and Norcross' (1988) study. Similar to the present study, Saunders and Norcross found positive relationships between the emotional tone (High

equaled more negative affect) represented in early childhood memories and Obsessive-Compulsive and Somatisation symptoms.

High levels of Negative Affect in the early childhood memory of Father were also found to differentiate people with high levels of Interpersonal-Sensitivity (feeling personally inadequate and inferior) from people with lower levels. Interpersonal Sensitivity can be especially noticeable when evaluating oneself against others who seem to be comfortable with themselves, both privately and in social situations (Derogatis, 1993). With this in mind, Negative Affect terms such as powerlessness and inferiority can be seen to be congruent with Interpersonal Sensitivity, which is related to feelings of personal inadequacy and inferiority. Additionally, as the memory was in relation to father, this also supports the notion of fathers developing an openness to the world by encouraging the child to be brave in unfamiliar (social) situations (Paquette, 2004).

Women with high levels of Interpersonal Sensitivity were identified by low levels of self-rated positive affect (indicating a lack of Joy; Satisfaction; Enjoyment; Trust; Safety; Energy; Inner-calm and Freedom), rather than high levels of Negative Affect. These findings allude to another dimension or deeper level that is related to feelings of personal and public inadequacy that are not necessarily consciously available. Epstein (1998) contends that difficulties with interpersonal interactions trigger schemas (in memory) that previously were loaded with negative feelings.

That Negative Affect was related to representations outside of conscious awareness (Early memories) and at the same time was linked to self-reported

measures of psychological symptoms, supports Epstein's (1994) Cognitive-Experiential theory. He suggested that emotion in the experiential (unconscious) system was one of the main drivers of maladaptive behavioural tendencies. However, this proposition has been difficult to verify given the problem of accessing information in the experiential system via self-report measures.

Katz and Epstein (1991) demonstrated that emotion in the experiential system affected people without their conscious recognition by finding that 'poor rational' thinkers (which has some similarities to Obsessive Compulsive symptoms in the present study) showed more physiological arousal (anxiety symptoms) than the 'good rational' thinking group at the same phase of a stress task. Paradoxically, the 'poor rational' thinkers did not self-report any negative affect during a relaxation period of the study even though physiological measures indicated otherwise. Katz and Epstein conjectured that the 'poor rational' thinkers suppressed this emotion into the experiential system, but this was left as unexplained in their study. It can be argued that in the present study, unprocessed emotion was more directly accessed in the experiential system through its representation in early memories. Such affect was shown to be related to psychological health and thus more directly confirmed the affect that Katz and Epstein (1991) purported was an influence in the experiential system, but did not discuss. As Negative Affect was related to symptoms of Somatisation, Interpersonal Sensitivity, Obsessive-Compulsive, and Hostility, which are all measures of general distress, it may also indicate the importance of accessing the emotion that might be unexpressed.

Generally, the present results indicate that emotions related to content in the Experiential System may supply information that complements or underlies self-reported symptoms. Raskin and Rogers (1995) suggested that for clients to move towards psychological health they need to understand their emotions and not be afraid of them. However, even though it was important to find Negative Affect and low Positive Affect as predictors of psychological symptoms, assessment of Young's (1995) Maladaptive Schemas enabled a more complete profile of an individual memory than affect alone. Coding Young's maladaptive schemas enabled affect to be placed into a context that facilitated an interpretation of the memory. The next section discusses the value of profiles that are revealed from early memories that include object relations, affect and Young's maladaptive schemas and cites some examples to illustrate these combinations.

5.7   Important Examples of Combinations of Predictors for Psychological Symptoms

There were several combinations of schemas that were considered important predictors of Psychological Symptoms. Finding combinations of maladaptive schemas, object relations and affect supports theories which postulate that maladaptive schemas are triggered together or in sequence and that this process is often outside of conscious awareness (e.g., Beck, 1996; Epstein, 1999). These amalgamations also demonstrate the multifaceted aspect of psychological symptoms and their related underlying associations. The following examples included the predictors for Hostility and Psychoticism.

5.7.1 *Predictor Combinations for Hostility Symptoms*

There were four main predictors represented in the early childhood memories of people with high levels of self-reported Hostility symptoms. These included Negative Affect (Second Early Memory), Approval Seeking and Individual Distinctiveness (First Early Memory) and a negative Perception of Self (Memory of Father). Taken together, these underlying influences portray a profile of a person seeking acceptance and recognition while also having a feeling of no mastery or control over the environment. There are high levels of negative affect and individuals in the memory had distinctive qualities or characteristics. It is easy to imagine that when there is a desire to have the approval of significant others, situational triggers such as the perception that someone in authority (e.g., father) is being derogatory towards you, may activate hostility, especially when there are underlying feelings of a lack of mastery or control over situations.

The present data are broadly consistent with other research on hostility. For instance, Smith, McGonigle and Benjamin (1998) found that people with self-reported Hostility had retrospective accounts of early family environments in which they felt a lack of control (low perception of self) over the aggressive familial environment and tended to internalise being critical of themselves (negative affect). Approval-seeking behaviour was not measured in the Smith et al. study, but its representation in the early memories in the present study is understandable. Being self-critical in a hostile and neglectful environment is likely to produce a desire to seek approval from family members as a way of addressing feelings such as a low

sense of self worth. Not being valued by others as distinct individuals with positive qualities may also motive people to constantly seek for acceptance and approval. If this need was often unfulfilled it would reinforce the underlying negative affect and low perceptions of the self.

The present findings are also consistent with Saunders and Norcross (1988). As in this study, Saunders and Norcross found that negative affect and a low perception of the self that were represented in early memories were related to self-reported symptoms of Hostility. However, the addition of themes of Approval Seeking adds another dimension to our understanding of the experiences of people who are high in Hostility.

5.7.2 *Predictor Combinations for Psychoticism Symptoms*

Psychoticism symptoms were associated with low Perceptions of Self (in relation to memories of Father) a high Perception of Others, Subjugation and a Perception of the Environment as being safe (Father memories). People with this pattern of maladaptive schemas would perceive themselves as lacking in competence and mastery compared to other people. However, there was an absence of Defectiveness or Dependence schemas in the memories and the environment in relation to memories of father was perceived to be safe. Additionally, they would perceive others as both controlling (Subjugation) and benign. This mixture of predictors is puzzling as a profile, given that a low perception of self was one of the main predictors.

One interpretation suggests a profile underlying Psychoticism symptoms includes feelings of inadequacy and looking up to others and at the same time being subjugated by others. Some people might be perceived in a positive way and the self in a negative way. The low perception of self is congruent with the themes of subjugation that were also found. For people who perceive that they have no mastery over their environment and perceive other people as superior to themselves, it is understandable that they may also feel subjugated or allow themselves to be controlled by others. However, as a low perception of self was the strongest predictor of Psychoticism symptoms, this indicates that at a deep or core level, a lack of mastery over the environment such as being a passive follower, or a victim, is an important aspect of interpersonal alienation.

This line of thinking concurs with Saunders and Norcross' (1988) results and extends upon their study. They found that representations of low Perceptions of Self (lack of self-mastery) in early memories were related to self-reported symptoms of Psychoticism. However, in the present study Subjugation, which was not measured in the Saunders and Norcross (1988) study, emerged as another main predictor of Psychoticism symptoms. Feeling subjugated is congruent with a lack of control over the environment. According to Young et al. (2003), people with Subjugation schemas feel controlled by other people and seek to avoid the feeling of being powerless, harassed, or bullied by becoming compliant and suppressing their own needs. It is possible that a low sense of self such as a lack of mastery, subjugation, and powerlessness are particularly linked to the participant's relationship with his or her

father. For example, in extreme cases, feeling subjugated and powerless in relation to

father may lead to interpersonal alienation (psychoticism symptoms) such as never

feeling close to another person.

Another interpretation of the findings is related to the differences in profiles

of men and women. When men were not in the analysis there were only three

predictors that emerged for Psychoticism symptoms– A low Perception of Self, a

high Perception of Others and Subjugation. This suggests that men and women may

have different predictors for some psychological symptoms. This possibility is

investigated in the next section.

5.8   **Gender Differences in Predictors of Psychological Symptoms**

A feature of the results was that sometimes the women's data differed from

analyses of men and women combined. In relation to the Discriminant Function

Analyses, this was the case for Somatisation, Obsessive-Compulsive, Interpersonal-

Sensitivity, Paranoid and Psychoticism symptoms. The different profiles for these

symptoms are discussed in turn.

For Somatisation, 'Perception that the Environment was unsafe' was the main

predictor for women, but did not emerge when men were included in the analysis.

This indicates that an environment that is perceived unsafe was more of an issue for

women in relation to somaticism symptoms than it might be for men. Finding that

perceiving the environment to be unsafe only emerged for women is not surprising.

For instance, men are generally more aggressive and perpetrate more violence than

women in most societies (Segall, 1988) which may lead to women feeling more threatened in their environment than men.

In the case of Obsessive-Compulsive symptoms, Negative Affect and Emotional Deprivation were two of the predictors for these in the memories. Yet, when men were omitted from the analysis, these predictors were no longer significant. 'Perception of the Environment as Unsafe' emerged as the strongest predictor for women. This may suggest that Emotional Deprivation and associated Negative Affect is an important component when men are accounted for when investigating Obsessive-Compulsive symptoms. For women, the perception of their environment as unsafe, as for somatisation symptoms, is a stronger underlying issue.

With Interpersonal-Sensitivity, the main differences when comparing men and women were that Negative Affect in relation to memories of Father was a predictor when the men were included but was no long significant when only women were analysed. For women, low levels of Positive Affect became a predictor in relation to memories of Mother. This predictor was not significant when the whole sample was analysed. This suggests that for women where there was a lack of feeling joyful, satisfied, trusting and safe in relation to mother, these aspects were linked to feeling inadequate and inferior in social situations.

In the case of Paranoid Symptoms, Abandonment was the strongest predictor for men and women combined. It emerged twice as a predictor from two different memories (Father and Second Memory). Perceiving that the environment is unsupportive, such that one feels constantly on the brink of being left alone, or

abandoned, may well lead to reports of Paranoid symptoms. When women were analysed separately to men, Vulnerability to Harm and Negative Affect (memories of Mother) were the predictors. Vulnerability to Harm can be related to paranoid feelings in that there is an exaggerated fear that horrible events could strike at any time and that one will be unable to prevent these (Young et al., 2003). Some psychologists have speculated that parents of people with paranoid tendencies, excessively warned their children about making mistakes (Turkat & Maisto, 1985). The parents also reinforced the belief in their children that other people had malevolent motives, and consequently, they emphasised the importance of being constantly vigilant in this regard (Beck & Freeman, 1990). This may be one explanation for acquirement of schemas that lead to reports of suspicion and a fear of losing autonomy in the present study.

Another aspect of the gender differences in predicting Psychological Symptoms, is that as groups become less heterogeneous, profiles (predictors) become more specific for that particular group. This suggests that for particular samples, such as a clinical group, predictors become quite specific for those people and thus more accurately pinpoint underlying schemas. This may, to a lesser degree, also be the case where different profiles or predictors were found for men and women. It raises the possibility that on a deeper level, there are certain issues that differentiate men and women with similar psychological symptoms.

Overall, the results have demonstrated links between unconscious maladaptive schemas, object relations and self-reported psychological symptoms.

Analysing the combinations of unconscious predictors of psychological symptoms has revealed profiles that may help to understand the self-reported symptoms in a more meaningful way than self-reports on their own.

5.9 The Relationship of Unconscious Schemas to Psychological Health

The present findings suggest that there is a connection between schemas that are arguably outside of conscious awareness and psychological health. The following sections discuss the findings from both Study 1 and 2 in relation to the theories that underpin this view (i.e., Beck, 1996; Bruhn, 1990b; Pacini & Epstein, 1999; Williams et al., 1997; Young et al., 2003). The findings are then related to previous research on maladaptive schemas and the influence of unconscious processes on psychological health and well-being.

5.9.1 Evidence of unconscious processes in Early Memories and their relationship to conscious perceptions of psychological health

Although unconscious processes cannot be directly observed (Epstein, 1987), it has been argued that early childhood memories are able to reveal information that is outside of conscious awareness (Bruhn, 1990b; Mayman, 1968). The maladaptive schemas, object relations and affect that were identified in the early memories were related to psychological functioning. All these representations may, or may not, be consciously and overtly reflected upon by the person. The degree of self-reflection and conscious attention people pay to trying to understand formative influences in their lives will vary. Generally though, it is assumed, as argued in Chapter 2, that early childhood memories uncover information that is often outside of conscious

awareness. It was demonstrated that information revealed in memories has predictive value in relation to people with high levels of self-reported Psychological Symptoms (Study 1) and self-reported Maladaptive Schemas (Study 2). Indirectly, these findings support notions of the influence of schemas considered outside of conscious awareness, which is consistent with the propositions of Beck (1996), Young (1999), and Pacini and Epstein (1999).

The current results extend the findings of experimental psychologists who have demonstrated the influential role of processes that are often outside of conscious awareness. In experimental studies, convincing evidence of the pervasive influence of unconscious processes has been found in areas of implicit memory, learning and perception (Graf & Masson, 1993; MacLeod, 1998; Williams et al., 1997). This information, absorbed by people at an unconscious level (McLeod, 1998), was found to be stored over their lifespan, regardless of age (Naito & Komatsu, 1993). From this point of view, the results from both studies in this thesis indicate that salient information can be stored for long periods of time and is revealed in early childhood memories. This information, when recalled, is often congruent with self-reported psychological measures of current psychological symptoms. Whether this information is constructed from past experiences to reflect current psychological self-perceptions (e.g., Bruhn, 1989) or whether this information has been stored from early childhood experiences is not the point here. Rather, it has been found that representations of maladaptive schemas, object relations and affect in memories, consistently relate to current self-report measures of psychological health and

furthermore they are able to differentiate people with differing levels of psychological symptoms.

From studies in experimental psychology (e.g., Taylor, 2001), it has also been shown that unconscious information from a range of sources can influence people's responses to a range of conscious tasks, even from an early age. It can be argued that emotionally powerful and disturbing experiences are unconsciously stored when they are encountered at a young age. This is especially so when the child's conscious awareness is still developing (Epstein, 1999; Young et al., 2003). These experiences may influence psychological health and behaviour throughout life (Monte, 1995). In this regard, the results from this thesis extend upon experimental research studies by revealing the particular maladaptive schemas represented in memories that were able to identify people with high levels of reported maladaptive schemas. These schemas that probably stem from powerful unpleasant experiences (primes) in childhood may not be explicitly articulated by the person, but were indicators of current perceptions of oneself and others. For example, in Study 1 some core maladaptive schemas represented in the memories such as Social Isolation and Mistrust/Abuse were found to have more influence than other maladaptive such as Entitlement in terms of their relationship with high levels of self-reported maladaptive schemas.

Similar findings emerged in Study 2. A small number of maladaptive core schemas represented in early childhood memories were key indicators of a broad range of self-reported psychological symptoms. Although it cannot be said definitively that the maladaptive schemas represented in early childhood memories

are the cause of someone's psychological symptoms (Shedler et al., 1993), the

relationships found in both studies give added support to Epstein's (1999) contention

that the experiential system has core maladaptive schemas that may profoundly

influence health and behaviour without conscious awareness. In particular,

maladaptive schemas that are associated with dysfunctional relations with others, and

negative perceptions of the self and environment, have emerged as the most powerful

and potentially the most damaging.

In this regard, it is possible that the maladaptive schemas evident in the early

childhood memories were the main unconscious reasons for current self-report

schemas and psychological symptoms. This line of reasoning is consistent with

Bruhn's (1990a) Cognitive Perceptual Theory that suggests that people retain in

memory the information that is most pertinent and congruent with their core sense of

self and others. Bruhn (1989) argues that information gleaned from early childhood

memories is a précis of the most important issue/s or difficulties that continue to

affect a person's life. The present findings support this view, as there was a

congruency with the significant predictor schemas found represented in memories

and high levels of self-reported psychological dysfunction.

The results also lend support to Epstein's (1987) dual processing model of

consciousness that postulates that two systems (conscious and unconscious) operate

independently and influence feelings and behaviour over the lifespan. Epstein's

theory emphasises the experiential system's ability to work concurrently with the

conscious system, but to often be more influential in relation to psychological ill-

health and dysfunctional behaviour. This helps to explain why the maladaptive

schemas represented in the early childhood memories in Study 1 were related to, but

mostly did not mirror, self-reported maladaptive schemas.

Epstein (1994) and Pacini et al. (1998) make a similar claim to Bruhn (1990b)

that maladaptive schemas that operate outside of the conscious area of personality are

the most influential in affecting the behaviour of people generally and not just people

suffering from clinical conditions. Furthermore, Epstein and colleagues (Epstein,

1980, 1987; Epstein et al., 1992) propose that information processed in the

experiential system can reveal the particular source of a person's ill-health. The

results from Study 2 provide indirect support for this view. Even though it was not a

clinical sample, indicators in people's early childhood memories (representing

experiential system content) correctly identified people with high levels of self-

reported psychological symptoms. It can be argued therefore, that the relationship

found between the often-unconscious maladaptive schemas of people suffering from

high levels of psychological symptoms at least warrants further investigation in the

general population.

Epstein's (1999) ideas are compatible with psychodynamic theories (e.g.,

Blatt, Wein, Chevron, & Quinlan, 1979; Fowler et al., 1995) that suggest that early

childhood experiences can unconsciously influence a person's relationships with

others. Relationship schemas that stem from interactions with primary caregivers

contain conditional beliefs that are constantly reinforced by relationships with others

throughout one's life (Liese & Franz, 1997; Liotti, 1989). The present findings

support this psychodynamic premise. For example, in Study 2, early childhood memories of being abandoned by primary caregivers and a lack of control over the situation were related to high levels of self-reported General Distress. This suggests that abandonment has a particularly maladaptive and ubiquitous influence over the lifespan. It is probable that the abandonment schemas were constantly reinforced by events that were construed through the feeling of being abandoned. The importance of this point cannot be underestimated as it suggests that underlying a person's current general distress is the feeling that people are going to leave them. In this regard, the person may feel constantly anxious that he or she will be left alone at any time.

According to Kovacs and Beck (1978), and Young (1999), core or central schemas (such as abandonment) that develop in children become entrenched in their sense of self and in relation to their experience of others. These theorists agree that most maladaptive schemas develop in early childhood and are triggered by emotionally meaningful events throughout life. Results from the two studies concur with these ideas. In both studies, core maladaptive schemas that were related to dysfunctional relations with significant others that were characterised in early childhood memories differentiated people with high levels of current self-reported psychological dysfunction from people with lower levels.

An inclusive approach that incorporates information gathered from conscious and unconscious sources, supports Woike et al. (2003) who argued that there are two motivational systems that operate differently and reveal different sorts of information.

The two sources of information may furnish similar but distinct psychological material that would help to confirm a self-report diagnosis. It is also feasible that unconscious representations may reveal additional information to that of self-reports. In particular, in relation to the present results, maladaptive schemas are proposed to be a further resource of personal information that might be useful in a range of fields such as psychological research, therapy and clinical practices.

5.10   **Implications for Therapy**

The identification of important patterns of maladaptive schemas, object relations and affect in the early memories has several implications for therapeutic interventions. In this section three aspects of therapy are considered. The first aspect is a discussion of the reason for assessing unconscious representations in the early memories. It is suggested that accessing unconscious maladaptive schemas, affect and object relations, reveals crucial information in relation to understanding a client's underlying difficulties and concerns. This valuable resource expands the information gathered in therapy beyond what might otherwise be found from solely relying on conscious self-reports. The second aspect is the benefit of examining early childhood memories specifically for Young's (1995) unconscious maladaptive schemas. It was consistently found that schemas from Young's 'Disconnection and Rejection' domain were the main predictors of self-reported psychological dysfunction. Taking into consideration the results from both studies, the third aspect considered is the importance of educating people in regard to the development and understanding of maladaptive schemas

5.10.1 The value of Accessing Unconscious Information in Therapy

Some psychologists (e.g., many Cognitive Behavioural Therapists [CBT]) presume that clients can access all their beliefs and emotions and articulate them to the therapist (Beck & Weishaar, 1995). However, clinical practice suggests that many clients are not able to consciously reflect on life experiences, or access their feelings, even with brief training. They often block, or are out of touch with, some of their feelings for a range of reasons, such as, an inability to consciously express a clear problem, or that their problems are too emotionally painful to express (Hermans, 1987; Young et al., 2003).

This difficulty of accessing and expressing fundamental beliefs and feelings and reflecting on past experiences may help to explain Young et al.'s (2003) claim that even for a widely recommended therapy such as CBT, it only has initial success rates of 60 percent for common disorders such as depression. Recent reviews of the long-term effects of CBT with anxiety disorders came to similar conclusions (see Nadiga, Hensley, Uhlenhuth, 2003). Only modest gains were substantiated with two of the 78 studies reviewed. Young et al. also indicated that CBT studies into research outcomes generally cite relapse rates of around 30 percent after one year. Given that it seems one possible reason for the relatively poor outcomes for CBT stems from the inability of many people to access at a more conscious level their core beliefs and articulate their feelings, then the findings of this study suggest that early memories may assist in tapping these key schemas. As demonstrated by Study 1, early

memories represented a far wider range of maladaptive schemas than people could generally include in a more explicit fashion via Young's (1998) questionnaire.

An added advantage of working with early childhood memories is that they can be a catalyst for unleashing associated issues and feelings that are experienced in the present time but until now have not been consciously expressed. People find that writing down earliest memories is often a much easier task than trying to consciously conceptualise and express their psychological problems (Bruhn, 1989). In this way, memories can be evaluated in therapy so as to uncover implicit motives and develop new perspectives on past and present situations that have similar themes (Bruhn, 1990a; Hermans, 1987). Specifically, it is proposed that unconscious representations of maladaptive schemas, affect and object relations in early childhood memories activate different mechanisms to conscious processes. Therefore, analyses of these aspects in memories is necessary to gain greater understanding of clients' current problems than would be obtained from self-reported (conscious) information alone.

Research (e.g., Masson & Graf, 1993; Taylor, 2001) into unconscious processes has demonstrated that these mechanisms are not only active but are linked to the person's conscious processes. The maladaptive schemas represented in the early childhood memories in Study 1 and 2 that were found to be predictors of self-reported symptoms of psychological dysfunction attest to these associations. It was often the case that different, but conceptually similar information was elicited unconsciously from early childhood memories to that which was revealed by conscious, self-reports.

For instance, people identified as depressed had associated themes of abandonment in their memories. It was not the case that people who were depressed were differentiated by themes of grandiosity or early childhood memories of joy or happiness. These findings are consistent with early childhood memory theories such as those of Adler (1957) and Bruhn (1990b) that propose that the unconscious sense of self, as reflected in the early childhood memories, is mostly congruent with conscious experiences of the self. A person who perceives themselves in a certain way usually remembers aspects of his or her self in the same way (Adler, 1957). This notion of cohesive unconscious and conscious aspects within a person also corresponds with unified self-theories such as Epstein's (1999) and supports Bruhn's Cognitive Perceptual Theory of early childhood memories. In general, unconscious information about the self in the form of schemas, affect and object relations, inadvertently and profoundly affects behaviour (Epstein, 1999). Therefore, accessing this unconscious information and making it explicit can provide direction as to what issues to focus on in therapy (Williams et al., 1997).

According to Bruhn's CPT (1985), people store information in memory that is important to their development. They remember that which has the greatest perceived usefulness or meaning to them. From this perspective, the present findings indicate what issues are important to focus on in a therapeutic setting. The following memory illustrates how the information in memories can be used in therapy to gain information about a person's unconscious awareness of present difficulties in the

form of core maladaptive schemas or, as Epstein and Pacini (1999) explain it,
experiential information. This memory is from a man who is 28 years old.

> 'I heard my mother and father yelling at each other. I opened the kitchen door
> to investigate and I saw my mother crying and my father yelling at her. I
> remember feeling scared and helpless. ***They did not stop when they saw me***
> so I closed the door again. ***I felt powerless to do anything*** *and sad* that they
> cannot talk to each other.' The strongest feeling: 'sadness and despair'.

This person endorsed high levels of Emotional Deprivation schemas in his
self-report measure. Emotional Deprivation is also quite evident in his early memory
but the memory information has the advantage over the self-report of placing his
feelings and concerns into a context. He felt scared with his parent's fighting, but
they did not stop their fighting when he came into the room. He was not even
acknowledged. There is also a feeling of powerlessness and helplessness at not being
able to do anything for his parents. In a therapy session the feelings associated with
his parent's fighting and his needs not being met can be explored further. Also, his
experience of being powerless to intervene in his parent's, or others' affairs, would be
important to investigate as a possible current major issue. The lack of communication
between himself and his parents and the feeling that his father was dominating his
mother or that she was passive in the situation is another important aspect to analyse
in the therapy session.

Findings from previous clinical practice that have used early childhood
memories (e.g., Adler, 1965; Bruhn, 1984; Fowler et al. 1995; Mayman, 1968) have
recommended that they be analysed for both their latent and more obvious levels of

meanings. This (above) memory can be interpreted from the point of view that this person's relationship with his parents may still hold the same dysfunctional dynamics. The memory may also be interpreted and checked with the client to see whether he feels the same kind of powerlessness in his other close relationships. He may feel unable to intervene when relationship difficulties occur and then feel powerless and as though he is not being included or listened to. On an even deeper level it is also possible that this man has an internal fight going on. For example, the authority (or masculine) part of himself may be dominant and his creative (or feminine) part may be submissive and not heard. From either point of view, the memory can be interpreted as a metaphor for current issues that this person is experiencing and it may hold clues as to where to best focus the therapy.

The following memories are another example of how information can be used in therapy to gain information about a person's unconscious awareness of present difficulties. This time, four early memories are given to illustrate the themes across the memories from a woman who is 43 years of age.

> Memory 1: 'My birth and being lifted up by one leg. Feeling severe pain in my hip and wondering who this person was who was pulling me around. Where's my mother? **Feeling isolated alone, unsupported and hurt'.** The Strongest feeling: **'Mistrust'.**
> Memory 2: 'I was 2-3 years old. I ran excitedly into my mother's room bursting to tell her something. It was dark and she was breastfeeding and **she became cross and asked me to leave**. **I didn't think she cared about me then'**. The strongest feeling **"Rejection, not being important, crushing feeling'**.

Memory 3 of Mother: "My mother was reading and **I felt frustrated that she did not listen to me, I was just ignored.**'

The strongest feeling: **'Frustration over being ignored'**.

Memory 4 of Father: 'My father took me to kindergarten and holding my hand very tightly and **promising that he would not leave me. He then left me and I was devastated'**

The strongest feeling: **'He lied and left.'**

This person had elevated levels of self-reported Mistrust/Abuse, Self-Sacrifice and Unrelenting Standards schemas. The Mistrust/Abuse that this participant has self-reported, is congruent with the unconscious schemas that are represented in the memories. However, there are also Emotional Deprivation and Abandonment schemas represented in the memories. Themes of not being supported or listened to, isolation, and betrayal may underlie this person's elevated self-reported schemas. In this case, there are references to this person's mother not being available to satisfy her emotional (or physical) needs and consequently her feelings of rejection and isolation.

Additionally, her father, who at a latent level may also symbolise her husband or men in general, says one thing and does another. He promises to be there for her and then lets her down at a time when she feels she needs his support the most. As a result, she is unable to trust her father (or husband or men). As themes such as betrayal and mistrust are in the context of characters and situations in the person's life, it is more likely that similar emotions and circumstances can be identified at the present time in much more detail than with a self-report questionnaire.

It could be interpreted that this person's conscious endorsement of Self-Sacrifice and Unrelenting Standards may be compensating for underlying (latent) feelings of mistrust and betrayal that are revealed in the early memories. It is possible that core feelings of being ignored and betrayed have led to an extra vigilance in the form of putting herself last and attending to other people's needs first. Therefore, by developing self-sacrifice and high standards for herself, she may unconsciously believe that this behaviour will lead to acceptance and love from significant others. In therapy, the underlying issues can be discussed and explored using concrete examples that stem from the memories and relating them to current problems that have brought the client to therapy. As a consequence, insight into this person's problems is possible.

Epstein (1998) suggests that insight into unconscious processes is important in relation to controlling maladaptive behaviour. Epstein and Pacini (1999) further indicate that to deny the experiential system's influence is to be controlled by it. They maintain that to bring about a balance between the rational and emotional aspects of the self, a person needs to be aware of the contents of the experiential system. For instance, the woman in the previous example was conscious of Self-Sacrifice and Unrelenting Standards schemas. However, the feelings of betrayal and mistrust may be much more difficult to access or acknowledge on a conscious level and therefore accessing them through early memories and discussing them, would lessen the likelihood of being controlled by them.

In summary, the results from both studies endorse accessing information from the experiential system (or outside conscious awareness). Epstein (1994) considers this the most pertinent information to be uncovered in relation to understanding maladaptive behaviours. The present studies have built on Epstein's theory by utilising a practical method of eliciting valuable information from the experiential system via early childhood memories that is in addition to that found from self-reported questionnaires. In particular, the findings have confirmed a relationship between the experiential system and psychological health.

5.10.2 *The Importance of Identifying Young's (1995) Maladaptive Schemas in Therapy*

Finding so many of Young's (1995) maladaptive schemas represented unconsciously as predictors of self-reported psychological dysfunction in both studies supports and extends Young et al.'s (2003) proposal regarding the dysfunctional and powerful influence of maladaptive schemas that reside at a deep or (unconscious) core level. The results also extend on Young et al.'s clinical findings by confirming the pervasive influence of maladaptive schemas within a non-clinical sample. Therefore, these results have implications for the general population seeking therapy.

Given that previous research (e.g., Josselson, 2000) has found that core (unconscious) maladaptive schemas are stable and lasting cognitive structures that develop from affective experiences in childhood, it is a logical assumption that maladaptive schemas represented in early childhood memories have similar pervasive attributes. Young et al. (2003) particularly stressed that the maladaptive schemas from the Disconnection and Rejection Domain caused the most psychological

damage of all of the maladaptive schemas. They came to this conclusion from their clinical practice. Young et al. (2003) believes that these schemas can influence the interpretation of events throughout a person's lifetime by affecting his or her perceptions of self, perceptions of others, perception of the environment and psychological health. Therefore, finding in Study 1 that maladaptive schemas from the Disconnection and Rejection domain are represented unconsciously and that these schemas were the main predictors of people with high levels of self-reported maladaptive schemas and psychological symptoms, reinforces their important relationship with psychological dysfunction.

In particular, it suggests that for clients in therapy who exhibit these schemas, it is important to consider that they may indicate high levels of psychological dysfunction and it is these schemas that need to be focused on. For example, the following memory shows evidence of schemas from the Disconnection and Rejection domain from a man with high levels of self-reported maladaptive schemas.

> 'I was swinging around in a circle to let go of a cricket bat so that it would fly up in the air into open space. I misjudged it and it nearly hit a boy my own age. **My father was really angry with me, but did not ask me what happened.** He was just looking after the other boy. **I was jealous** because he seemed to get along well with my dad. **I felt shut out from my father and hurt as I did not mean any harm.'**
> The strongest feeling was: **'upset at my father's lack of understanding'**.

This man's memory depicts his experience of Emotional Deprivation and Abandonment in relation to his father. There is a perceived lack of understanding of

his actions by his father. His father was more intent on looking after the needs of the stranger rather than his son's. As there are at least two schemas represented from the Disconnection and Rejection domain in this memory, the issues and feelings raised in relation to feeling deprived and abandoned are noteworthy. In particular, the relationship he has with his father and the associated feelings of emotional deprivation and abandonment would need to be explored in the therapy. He may feel as though his father loves and cares for other people more than him. The feelings of jealousy seem related to this perceived lack of love from his father.

It is also possible that this man feels that in general, other people are considered more special than him and that other peoples' needs for care and nurturance are perceived as being more important than his. It would be important to ask this man about these key aspects in his life in the past and the present. This may lead to a discussion of whether or not he gets his needs met now and how he goes about this task. The therapy setting is a place where this man could express his feelings and in a reversal of his previous experiences, have some of needs met, such as his need to be listened to and accepted rather than ignored.

A second example is from a woman aged 18 years. She had high levels of self-reported maladaptive schemas. Her First Early Childhood Memory contains examples of the predictor variables Mistrust/Abuse, Emotional Deprivation and Subjugation.

> 'When my family and I lived in ****, my brother and I were playing in the bathroom. I remember my brother picking up a bottle my mother used to dye things with and poured it all over himself. He then began to cry and yell out to

my mother. When she came in and asked what happened, **my brother blamed me** saying "I poured it over him". I was sent to bed without any dinner. I was **very upset that nobody believed me'.**

The strongest feeling is: **'being extremely upset that my parents did not believe me'.**

This memory illustrates betrayal and being wrongly accused of the misdeed and then suffering punishment for something she did not do. Consequently, there are elements of abuse towards her by the other characters in the memory. Her brother lies about the dye situation and her mother goes along with the brother. A theme in the memory to address in therapy would be that people close to her seem to betray her (cannot be trusted) and then blame her for their mistakes. Also, other people do not believe her side of the story. There are many relationships that can be explored that stem from this memory, including her relationship with her mother and brother and also other important relationships in her life. Assuming that the memory reveals unconscious information about her present difficulties (Bruhn, 1985) this memory may contain issues that reflect current problems that include similar dynamics to those represented in the memory. As in the previous memory, the therapy setting is a place where this person can experience what may often have been missing. In this case it would be expressing her view and being believed by the therapist that this is how she perceived her world.

The two memories discussed above contain maladaptive schemas from the 'Disconnection and Rejection' domain. Schemas from this domain are associated with an expectation that a person's need for a safe, secure and nurturing environment

will not be met in a predictable manner. Young et al. (2003) have found that client's with schemas from the Disconnection and Rejection domain tend to have family of origin environments which tend to be cold, detached, withholding, rejecting, lonely, unpredictable, explosive or abusive. As a result of such a dysfunctional upbringing, Young et al. suggest that one aspect of therapy should be a kind of re-parenting experience for the client.

This re-parenting process incorporates the development of an expectation in the client that in therapy one's need for a safe, secure, nurturing and stable environment can be met. In a therapeutic environment, clients can experience an open communication that includes empathetic acceptance and respect. Young et al. (2003) have found that this approach is very beneficial for people who have maladaptive schemas from the Disconnection and Rejection domain. The experience of therapy often challenges fixed negative expectations in the client and allows for the possibility of healing entrenched psychological wounds and dysfunctional ways of being. The advantage of using client's early memories is the immediacy and potency of an example that brings forth emotions, and the people and circumstances that typify a highly significant personal situation.

The next example is from Study 2. This early memory is from a young man suffering from Depression symptoms. The main predictor for Depression was Abandonment. The memory begins:

> 'When I was in primary school I was bitten on the shoulder by a bee. I went to the teacher and he asked sarcastically "And what's wrong with you. Got a broken arm?" **I was shocked and crushed** and went away without another

word. **When I went home and told my parents they did nothing about it.** I wished that they would ring the teacher and blast him. But they did nothing**. I felt a lack of support and care from them as well.'**

The strongest feeling: **'Despair'.**

This memory clearly has representations of Abandonment (and Emotional Deprivation.) This person has attempted to express a valid need and it was ignored and he was belittled for doing so. 'What's wrong with you?' was his caregiver's response in a cold and uncaring way. Even his primary caregivers (parents) did nothing to help him. People with these schemas often do not express their needs and also expect that people will not fulfill their needs, so they do not ask for help (Young et al., 2003). In therapy, experiences such as Abandonment (as in this memory) and Emotional Deprivation can be investigated in detail. First, through analysis of the implications of abandonment to the client in relation to the memory and then by investigating this theme in relation to other experiences.

Once the person's feelings, such as abandonment in the memory, can be expressed and acknowledged by the therapist, the person can perhaps begin to feel understood by someone (therapist) in a way that he may not have experienced before. The memory can also be interpreted so that the client becomes aware that themes of abandonment and emotional deprivation are major unresolved issues at present (Bruhn, 1985). By reflecting on and discussing these fundamental issues which are not usually expressed, and how they are affecting his current life and psychological

functioning (Depression), then the influence of the maladaptive schemas can be reduced.

5.11   The Advantage of Drawing Information from a Number of Memories

In the present research, predictors came from either spontaneous (first or second) memories, or memories of Mother or Father. Each of the four memories was found to have maladaptive schemas, affect and object relations as predictors of high levels of maladaptive schemas or psychological symptoms. Consequently, the findings from both studies attest to the value of using all four memories when gathering unconscious information in this way.

Therapists such as Mayman (1968) and Bruhn (1990b) indicate that asking for the first memory of mother or father is an efficient method of accessing a range of issues in relation to how the client relates to others and themselves. This probe can reveal information that may not otherwise have been revealed by the two spontaneous memories alone. For example, general distress (GSI) was predicted from Abandonment in the memories of Father and Insufficient Self-Control in the memories of Mother. This finding may suggest that general distress is related to perceived abandonment from father in combination with Insufficient Self-Control from mother. For people exhibiting general distress, their early memories could be analysed for both of these themes. Feeling abandoned by your father and fearing a lack of control in relation to your mother would indicate that there is not a father figure to be of assistance with a person's needs and the child does not feel safe or emotionally contained by the mother.

Once these two factors are revealed in the memories, then the therapist has a chance to interpret the way these schemas exhibit themselves in the person's life. The therapist can bring in some interventions, such as regularly being there (in the session) for the person, in ways that enable the client to feel supported and cared for, rather than abandoned. The therapist may also emotionally contain the client when there are difficult experiences or feelings that surface from the memories.

Gathering a number of memories from the same person broadened the range of maladaptive schemas, affect and object relations that were found in the early childhood memories. Having a number of memories also allows for the possibility of developing an individual profile of interrelated schemas from across the memories (Bruhn, 1990a).

5.12   Alerting Parents and Teachers to the Negative Effects of Maladaptive Schemas

The findings from this thesis reinforce the importance of understanding the consequence of unstable and insecure relationships such as those depicted in the previous examples of early childhood memories between caregivers and their children from an early age. Correspondingly, the present findings endorse the benefits of educating people, especially parents and teachers,about the harmful and long-term effects of the development of maladaptive schemas. This is particularly so when they are from the 'Disconnection and Rejection' domain.

People in influential positions in regard to children's development could be encouraged to understand the insidiousness of allowing maladaptive schemas to develop and to learn strategies to encourage positive counterparts (Azar & Wolfe,

1998). For instance, the results from Study 2 indicate that at an unconscious level, feelings of Abandonment (in relation to memories of father) and a lack of Self-Control (in relation to memories of mother) are linked to people with high levels of distress. Education that addresses the consequences and adverse affects of a lack of self-control and abandonment may reduce the development of forms of general distress in the long term.

Once parents are made aware of the potentially harmful effects of perceived abandonment that is experienced by their children then they may make more effort to make sure their children's needs are met. This education then would have two parts: the first would be developing ways of making the child feel safe, nurtured and protected and the second part would be outlining the long-term dysfunctional consequences of perceived abandonment. Teachers could also be aware of children who seemed vulnerable to maladaptive schemas and implement similar positive interventions in the classroom. Chorpita and Barlow (1998) encourage educating parents about the importance of imparting a sense of control over the environment to their children. Chorpita and Barlow found that providing a secure home situation where children can explore their environment with parents who are emotionally and physically available to meet their children's needs lowers the child's vulnerability to anxiety later in life. Additionally, when caregivers help children to regulate their emotions and model appropriate ways of expressing emotion, then their children are happier and more easily soothed (Eisenberg, Cumberland & Spinrad, 1998).

In contrast, when parents have difficulty in controlling anger and hostility, especially with their children, then the children have problems with psychological adjustment (Eisenberg et al., 1999, 2001). In this regard, the findings from Study 2 suggest what may happen if this is not the case. For example, representations of Abandonment (an environment of perceived unreliability or the instability of those people potentially available for connection and support) in early childhood memories were related to the groups with high levels of self-reported symptoms of Depression, Anxiety Paranoia and of General Distress.

In sum, the implications of the findings from this thesis are far reaching for workers in the counselling therapy field. It is often the case that there are constraints on the therapist to ascertain the core issues the client brings to therapy and to bring about some sense of positive change within a limited time frame (Binder & Smokler, 1980; Last, 1997). The results suggest that crucial information that the therapist needs to extract to help to understand and then rectify the client's difficulties may be represented in early childhood memories.

It is possible that this information may also contain the aetiology of psychological ill-health. The maladaptive schemas can be focused on in relation to their influence on a person's life and discussed with the intention of making these aspects more conscious. Once the person is aware of the sway of these maladaptive schemas on his or her life, the therapy can work towards lessening their untoward control. The next section discusses methodological considerations that arose from both studies and directions for future research.

5.13   Methodological Considerations and Directions for Future Research

This section examines several methodological issues that need to be considered in evaluating the findings and identifying directions for future research. First, sampling issues are discussed in relation to the participants mostly being university students of a similar age with men being under-represented. Second, issues surrounding identifying people who indicated that they were experiencing high levels of maladaptive schemas or psychological symptoms ('cases') are considered. Finally, the advantages and disadvantages of self-rating affect in early childhood memories are discussed.

5.13.1 Sampling Issues

There were a number of issues that need to be considered in relation to the sample and interpreting the results. One of the main methodological concerns in the present research was that the samples for both studies were drawn solely from university students who were predominately young adults. In Study 1, 57 percent of the students were aged between 17 and 19 years and in Study 2, 68 percent of the students were aged between 18 and 19 years of age. As a large proportion of the samples comprise young adults of a similar age, this may mean that the results do not generalise to other age groups. The particular difficulties that are relevant to university students in this age group may be quite different when compared to those of older people such as married couples. Therefore, the self-reported maladaptive schemas and psychological symptoms may have associated unconscious predictors that would be different for an older group of people. However, given that at least 30

percent of the people in both studies were older than 19 years of age, the results may also apply to older people, although there is a need for this to be confirmed with further research.

Another sampling issue was the over representation of women compared with men in both studies. Eighty percent of the total sample consisted of women in Study 1 and 75 percent of the total sample were female in Study 2. Although there was not a significant difference in men's and women's overall self-reported maladaptive schema scores in Study 1, there were differences in some of the subscales. Women had significantly higher levels of self-reported Dependence and Incompetence and Self-Sacrifice when compared with the men. In contrast, Men had higher levels of Entitlement when compared with the women.

There were also gender differences in Study 2 with men having significantly lower levels of Somatisation, Obsessive Compulsive, Interpersonal Sensitivity, Anxiety, Hostility, and Paranoid symptoms when compared with the women. It is sometimes the case that women and men have different levels of concern or are affected in different ways (Thompson & Stice, 2004). It is possible that these differences are reflected in the results in both studies. If this is the case, further research could incorporate analysing early childhood memories for gender differences with a more equal representation of men.

Another limitation was related to the socio-economic status (SES) of the sample. Because the people involved in the study were enrolled in a tertiary education course, they can generally be considered to be well educated and articulate.

Therefore, for these people, it may have been easier to elicit and describe memories than less well educated people. However, there is evidence that the utility of gaining useful information from people with a lower SES is robust using early memories. It was found that people who were unusually reluctant to express their concerns or who found it hard to articulate their difficulties were able to do so through recalling their early memories (e.g., Demuth & Bruhn, 1997; Elliot et al., 1993).

A further consideration to mention was in relation to statistical issues. Firstly, it is important not to over-interpret the Polyserial correlations in both studies, as when a number of correlations are calculated, the probability of Type 1 errors can increase. However, as both studies were exploratory, it was considered important to report all possible summary relationships in the form of polyserial correlations among representations in the memories and current self-reported information. As Harris (1985) suggests with exploratory studies, it is important to find a balance between being too conservative with the significance levels and possibly missing information (such as by implementing Bonferroni approach), as opposed not conservative enough with significance levels and incurring Type 1 errors. With this balance in mind, correlations were only reported at the less than .01 significance level and if they were greater than .20 in magnitude.

The other statistical issue was the analyses of men's data in relation to the DFAs. There were simply not enough men in the groups to run separate DFA's for men. To try and address this limitation, the whole sample was analysed first, and then women were analysed separately to look for differences. Gender differences seemed

to emerge in that different predictors were found for men and women with many psychological symptoms. However, this does not necessarily indicate gender differences, as there were only about 50 men in each analysis. These are external validity issues, as the university sample of men may not be representative of society generally. Therefore, the results from both studies need to be interpreted with these factors in mind and await future research.

Nevertheless, it was shown that for people from this age group, unconscious maladaptive schemas represented in early childhood memories are an important additional factor to consider when investigating psychological health. From this point of view, these schemas were found to be relevant for a non-clinical sample. Finding relationships between unconscious maladaptive schemas and self-reported Maladaptive Schemas and Psychological Symptoms in a university sample, rather than a clinical sample, is good evidence for the ubiquitous influence of unconscious schemas on psychological health. Further examination of the role of unconscious maladaptive schemas that are represented in early childhood memories with a sample that is more representative of the population is warranted based on the results of this thesis and, furthermore, to examine whether there are differences found with clinical samples.

5.13.2 *The Problem of Identifying People as 'Cases'*

A potential problem with gathering information about people's maladaptive schemas and psychological symptoms is that many people may not have any pressing problems at the time of data collection. In a clinical setting, respondents have more

pressing issues and difficulties that may be more readily represented when asking for their early childhood memories. In this thesis, a large sample size was used to maximise the numbers of people that could be identified as fitting into the groups with high levels of Maladaptive Schemas (Study 1) and high levels of Psychological Symptoms (Study 2). The intention was to obtain sufficient numbers of people who could be defined as a 'case' (people with high levels of a symptom) and comparison groups (people with lower levels of a symptom) that were considered relatively maladaptive schema free or psychological symptom free. Yet, there is a possible problem here, as a person being defined as a case by the researcher may not perceive themselves as a case.

The primary concern in the present studies was to clearly define people with a level of Maladaptive Schemas or Psychological Symptoms that would be distressed enough to report that they had difficulties and/or seek therapy, into groups. In Study 1, the first DFA used the whole sample that was divided into three equal groups – low, medium and high. The high group had reported schema scores that were approximately one standard deviation above the mean. However, this was an arbitrary decision in making cut-off scores for the high groups in Study 1, as there are no norms as yet for Young's (1998) measure. Nevertheless, it can be argued that the first DFA analysis in Study 1 was to investigate general patterns in the data that may have reflected the relationship of maladaptive schemas represented in the memories to reported maladaptive schemas. In hindsight this method was vindicated as clear patterns were found.

In Study 2, the high group or cases, were based on guidelines drawn from Derogatis (1993). He suggested that a 'clinical case' was approximately one standard deviation above the mean (63 T-score) in the case of psychological symptoms. Therefore, this score was used as a measure to define the high groups for the second DFA's in Study 1 and for high groups in Study 2. However, further research is warranted to verify cut-off points for designated groups, especially those deemed to be in the high group.

Another potential problem was that some people may have had unconscious maladaptive schemas represented in their early childhood memories but did not consciously self-report maladaptive schemas or psychological symptoms. Epstein (1992) posited that unconscious maladaptive schemas can reside in the experiential system, while at the same time, opposite beliefs might be held consciously in the rational system. It was the case that there were people in both studies that had high levels of unconscious maladaptive schemas, object relations (and affect in Study 2) represented in their early childhood memories (that might be congruent with their experiential system) but consciously self-reported an absence of maladaptive schemas (for people in Study 1) or psychological symptoms (for people in Study 2). Inclusion of these people makes the analyses underestimate the correct allocation of people with high levels of self-reported symptoms or maladaptive schemas.

Shedler et al. (1993) encountered this situation in their study. The representations in the early childhood memories suggested distress but the self-reports indicated no distress. It was the physiological measures in their study that

confirmed the distress that was represented in the early childhood memories, even though these people were consciously denying that there was anything wrong. However, this possibility arising in the present studies would tend to underestimate the relationships that were there rather than over estimate them. Therefore, the results that were revealed in both studies may be quite conservative in regards to the influence of unconscious maladaptive schemas on current self-reported psychological health.

The people that self-reported high levels of maladaptive schemas in Study 1 or those people who reported high levels of Psychological Symptoms and correspondingly had low levels of maladaptive schemas and object relations (and in the case of Study 2, low levels of Negative Affect) represented in their early memories, are more difficult to explain. In the case of Study 1, there were a small number of people with high levels of self-reported maladaptive schemas but low levels of schemas in their memories. This suggests that these people are self-reporting difficulties but they are not indicated in their memories. Future research into these people is important, as they do not fit the general trend of the data. One possibility is that some of these people are 'faking bad' but it would seem that there would be some indication of this in the memory. In Study 2, there were no cases of people with high levels of self-reported symptoms scores and no maladaptive schemas in their memories.

The accuracy of the BSI (Derogatis, 1993) in identifying 'cases' in terms of psychological symptoms is another potential problem. Various papers have suggested

that the BSI comprises one factor of distress, rather than nine different subscales. Other researchers (e.g., Hayes, 1997; Piersma et al., 1994) suggest that there are less than nine factors. However, it is argued that at present, most clinical applications would utilise the scale and factors as they exist in the manual by Derogatis (1993) and it was on this basis that groups were formed for Study 2. Additionally, the robustness of the group differences that were found in both studies tends to support the group allocations that were made.

5.13.3 *Measurement Issues with Coding Memories*

In terms of measure and coding levels of schemas in memories, there were advantages found in having people assess levels of affect and the intensity of feelings in their early childhood memories. In particular, the incorporation of self-rated Affect in Study 2 was found to be an import adjunct to the scoring system. At first glance, early childhood memories often seemed devoid of affect. For example, "I hid under the bed" may have many different types of affect that are associated with this scene that were not recorded in the memory. This person may have hidden for reasons such as fear, or boredom, or play, or anger. The addition of self-rated Negative Affect terms (Hermans & Hermans-Jansen, 1995) and a rating scale after the memories helped a great deal in gathering more information.

In hindsight, the inclusion of Affect in the ratings in Study 1 would possibly have improved the study's design. Given the number of times Affect was found as a predictor variable in Study 2, this additional affective information may have improved the predictions for people with high maladaptive schema scores. It was also

the case that more specific information was gathered about affect related feelings and their intensity than was the case in Study 1 where self-rating the memory for affect was not included. Additionally, the self-rating scale helped to strengthen the validity of the results, as it was a second measuring instrument that could verify affect and its intensity, especially when it was not obvious from the content of the memory.

5.14   Future Research

The findings from the present study established the worth of investigating early childhood memories and their representations of object relations, Young's (1995) maladaptive schemas and self-rated affect. Future research would benefit from investigating these variables using clinical samples. As previously mentioned, the samples for the two studies in this thesis were drawn from university students. In line with previous research (e.g., Lee et al., 1999; Schmidt et al., 1995), it is anticipated that people suffering from clinical conditions would have a greater number of specific schemas along with greater intensity than was found in the non-clinical samples used in this thesis. Additionally, as in the study by Shedler et al. (1993) concurrent measures of distress such as physiological measures would help to clearly identify people designated as having high levels of a particular symptom of psychological distress. In any case, replication studies would help to clarify the preliminary findings from both studies in this thesis.

As far as the author is aware, this is the first time that unconscious representations of Young's (1990) maladaptive schemas have been investigated in relation to early childhood memories. Given the relatively small range of maladaptive

schemas represented in early childhood memories that were significantly related to current self-reported maladaptive schemas and psychological symptoms, replication studies are needed to confirm similar conscious - unconscious connections. In particular, finding certain profiles of predictors from Young's (1995) maladaptive schemas along with Affect and Object Relations represented in early childhood memories that were related to a range of self-reported symptoms, suggest that future research may clarify these unconscious representations that are linked to certain psychopathologies. The findings signify that different core issues may affect people depending on their symptoms. It would be important to discover whether future research can replicate these profiles. In this regard, potential gender differences could also be investigated in regards to the relationship of unconscious core maladaptive schemas to particular psychopathologies.

Further research that follows individuals to gather more qualitative information on the issues (schemas) that were revealed from the memories may be able to track therapeutic change. Previous research has found that profiles represented in early childhood memories can change over time and as such were useful indicators of therapeutic change (e.g., Savill & Eckstein, 1987). A test of representations of Young's (1990) maladaptive schemas indicating psychological issues could be investigated so as to determine whether there were changes in the representations of maladaptive schemas, affect and object relations in early childhood memories as self-reported maladaptive schemas or psychological symptoms decreased.

Future research could also investigate maladaptive schemas in people from other cultures. It is possible that different maladaptive schemas that stem from different cultural experiences will be present than were found in the results from these studies. Based on object relations and psychodynamic theories (e.g., Blatt, Wein, Chevron, Quinlan, 1979; Fowler et al., 1995) some psychological predictors may also be found to be similar to the ones found in this thesis given that early childhood attachment tends to be a universal phenomenon.

5.15   Conclusion

In conclusion, the findings from this thesis support previous theories (e.g., Beck, 1996; Pacini & Epstein, 1999; Young, 1999) that contend that there are at least two aspects of cognitive processing - conscious and unconscious that need to be investigated, to more fully understand people's psychological problems. Whether unconscious processes (experiential system) are more influential than conscious processes in terms of psychological health remains to be ascertained. However, the present research has found that particular core maladaptive schemas (Young, 1995) and their associated affect and object relations that are represented unconsciously in early childhood memories were able to identify people with high levels of self-reported maladaptive schemas and high levels of Psychological symptoms.

One of the key findings was that maladaptive schemas from Young's (1995) 'Disconnection and Rejection' domain were strongly represented in early childhood memories as predictors that differentiated people with high levels of self-reported maladaptive schemas and psychological symptoms from those with lower levels.

Finding these particular schemas which may, in many cases, only be represented indirectly and at a relatively unconscious level in memories, further confirms and extends Young et al.'s (2003) claim that schemas from this domain are the most damaging in terms of psychological health. Another key finding was the significant contribution of Affect and Object Relations represented in early childhood memories as predictors that differentiated groups with high levels of self-reported psychological distress and a range of psychological symptoms from groups with lower levels.

It has not been argued here to do away with self-report measures, but rather, the current thesis emphasises the importance of integrating early childhood memories into research and therapy. In so doing, it is possible to gain insight into the underlying schemas that may or may not be consciously articulated by the person. By analysing schemas that are revealed less directly in early memories, therapists are able to broaden the available resources for understanding clients' problems. In particular, examining representations of maladaptive schemas, affect and object relations in early memories is an important additional indicator for assessing people's psychological difficulties that may otherwise be missed by using only self-report measures.

The results from both studies warrant further research to see whether the findings can be replicated using different samples. It is believed that these findings have contributed to a body of knowledge about particular unconscious maladaptive schemas, affect and object relations that are related to psychological dysfunction.

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Appendix A.1 Study 1 Information Page to the Participants

SWINBURNE UNIVERSITY OF TECHNOLOGY SCHOOL OF SOCIAL AND
BEHAVIOURAL SCIENCES

Project Title: The relationship between Early Memories and Maladaptive Schemas.

INVESTIGATORS: Steve Theiler (Coordinator of First Year Psychology at Swinburne
University of Technology (Lilydale).
Senior and Associated Investigator: Dr. Glen Bates (Acting Head of Psychology at Swinburne
University of Technology (Hawthorn).

This study will extend upon previous research by investigating the association between Early
Memories and a person's current Schemas (themes or patterns in ones life).
As a participant you will be required to write down four early memories of a specific happening
that occurs to you, followed by your evaluation of the memory. Following this you will be
asked to fill out a Schema Questionnaire.
Your initial agreement to participate does not stop you from discontinuing at any time. The
results from this study will be published as part of a Professional Doctoral thesis and may upon
completion, appear in psychological publications, but only as group data. Individual responses
may be used to illustrate theoretical points but no names will be associated with this data.
Please be assured that all your responses will be anonymous and that your participation is
voluntary. To ensure anonymity a post-graduate research assistant will be employed to enter the
data. You are free to withdraw at any time. It is anticipated that this questionnaire will take 30-
45 minutes to complete. When you have completed the questionnaire please place it in the
envelope provided.
If this questionnaire raises any issues for you please do not hesitate to contact your tutor (or the
coordinator of this subject). Alternatively, you may contact student-counselling services at the
Hawthorn Campus- Telephone: 92148025 OR
Lilydale Campus-   Telephone: 92157101.

> Any questions regarding the project titled: The relationship between Early Memories
> and Maladaptive Schemas can be directed to the Senior Supervisor Dr. Glen Bates of
> the Department/School of Psychology on telephone number 92148100
> or Steve Theiler on telephone number 92157125

In the event that you have any complaint about the way you have been treated during the study,
or a query that the Senior Investigator has been unable to satisfy. Please contact

> The Chair
> Human Experimentation Ethics Committee
> Swinburne University of Technology
> P O Box 218
> HAWTHORN. VIC. 3122

A.2 Study 1 Questionnaire (Young's, 1998; YSQ-S)

Y S Q -S1   Developed by Jeffrey Young, Ph.D.

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 before 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**

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

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 one 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**

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

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 overinvolved 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 parents or partner.   ***em**

46. _____ I think 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 peoples' 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**

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

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).

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.

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

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**

Developed by Jeffrey Young, Ph.D.

- Please tick whether you are   male ☐   or You are female   ☐

Your current Age in years _____

A.3 Study 1 Early childhood memory instructions and rating scales

(It is important to not spend too much time on any one question and remember there are no right or wrong answers to any question in the questionnaire.)

FIRST EARLY MEMORY

Think back to the earliest memory you have of a specific happening or event from your childhood. Choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. **Remember to include how the memory begins for you and how it ends as well as how you felt about what happened**.
"I remember one
time_____

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(If you need more room just write on the back of this page with a PTO here).

Please answer the following questions about the memory.
What is the clearest part of the memory?

_____
What is the strongest feeling in the memory? _____
 Please rate the intensity of the feeling **HERE** ____ where 0 = NOT AT ALL STRONG
1 = MILD   2 =MODERATELY   3 = QUITE STRONG 4 = EXTREMELY STRONG
What thought or action is this connected with?

_____
If you could change the memory in any way, what would that be?

_____

How important is the memory?_____**(Please rate as above here)**____
How intense is the memory?_____**(Please rate as above here)**____

SECOND EARLY MEMORY

What is the next early memory that comes to mind? This may be chronologically the next early memory or another early memory that comes to mind. Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. Remember to include **how the memory begins for you and how it ends as well as how you felt about what happened.**

"I remember one
time_____
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_____(If you need more room just write on the back of this page with a PTO here).

Please answer the following questions about the memory.
What is the clearest part of the memory?
_____
What is the strongest feeling in the memory? _____
 Please rate the **intensity of the feeling HERE** ____Where 0 = NOT AT ALL STRONG
1 = MILD   2 =MODERATELY   3 = QUITE STRONG 4 = EXTREMELY STRONG
What thought or action is this connected with?
_____
If you could change the memory in any way, what would that be?
_____

How important is the memory?_____**(Please rate as above here)_____**
How intense is the memory?_____**(Please rate as above here)_____**

FIRST MEMORY OF YOUR MOTHER (or mother figure)

What is the early memory that comes to mind in relation to your mother. Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. **Remember to include how the memory begins for you and how it ends as well as how you felt about what happened**. "I remember one time_____

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_____(If you need more room just write on the back of this page with a PTO here).
Please answer the following questions about the memory.
What is the clearest part of the memory?

_____
What is the strongest feeling in the memory? _____
 Please rate the **intensity of the feeling** HERE _____ Where 0 = NOT AT ALL STRONG
1 = MILD   2 =MODERATELY   3 = QUITE STRONG   4 = EXTREMELY STRONG
What thought or action is this feeling connected with?

_____
If you could change the memory in any way, what would that be?
_____
___

How important is the memory?_____(Please rate as above here) ___
How intense is the memory?_____(Please rate as above here)___

FIRST MEMORY OF YOUR FATHER (or Father figure)

What is the early memory that comes to mind in relation to your father? Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. **Remember to include how the memory begins for you and how it ends as well as how you felt about what happened**.
"I remember one
time_____

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_____(If you need more room just write on the back of this page with a PTO here).
Please answer the following questions about the memory.
What is the clearest part of the memory?

_____
What is the strongest feeling in the memory? _____
 Please rate the **intensity of the feeling** HERE ____Where 0 = NOT AT ALL STRONG
1 = MILD   2 =MODERATELY   3 = QUITE STRONG 4 = EXTREMELY STRONG
What thought or action is this connected with?

_____
If you could change the memory in any way, what would that be?

_____
__
How important is the memory?_____(Please rate as above here) ___
How intense is the memory?_____(Please rate as above here)____
- Thankyou for participating in this study

A.4   Coding Scheme for Raters of the Early Childhood Memories

If any of these maladaptive schemas are present in the early childhood memory, then place the code e.g., Abandonment = AB at the base of the memory and rate its intensity based on the intensity level the respondent has endorsed underneath the memory as well as from the information in the memory.

Definitions of Schema Domains and Early Maladaptive Schemas

January, 1995 Revision

DISCONNECTION & REJECTION DOMAIN (1)

(Expectation that one's needs for security, safety, stability, nurturance, empathy, sharing of feelings, acceptance, and respect will not be met in a predictable manner. Typical family origin is detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive.)

1. **ABANDONMENT / INSTABILITY** (AB)

The perceived *instability* or *unreliability* of those available for support and connection.

Involves the sense that significant others will not be able to continue providing emotional support, connection, strength, or practical protection because they are emotionally unstable and unpredictable (e.g., angry outbursts), unreliable, or erratically present; because they will die imminently; or because they will abandon the patient in favor of someone better.

2. **MISTRUST / ABUSE** (MA)

The expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage. Usually involves the perception that the harm is intentional or the result of unjustified and extreme negligence. May include the sense that one always ends up being cheated relative to others or "getting the short end of the stick."

3. **EMOTIONAL DEPRIVATION** (ED)

Expectation that one's desire for a normal degree of emotional support will not be adequately met by others. The three major forms of deprivation are:

A. *Deprivation of Nurturance***:** Absence of attention, affection, warmth, or companionship.

B. *Deprivation of Empathy*: Absence of understanding, listening, self-disclosure, or mutual sharing of feelings from others.

C. *Deprivation of Protection*: Absence of strength, direction, or guidance from others.

4. **DEFECTIVENESS / SHAME** (DS)

The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects; or that one would be unlovable to significant others if exposed. May involve hypersensitivity to criticism, rejection, and blame; self-consciousness, comparisons, and insecurity around others; or a sense of shame regarding one's perceived flaws. These flaws may be **private** (e.g., selfishness, angry impulses, unacceptable sexual desires) or **public**(e.g., undesirable physical appearance, social awkwardness).

5. **SOCIAL ISOLATION / ALIENATION** (SI)

The feeling that one is isolated from the rest of the world, different from other people, and/or not part of any group or community

IMPAIRED AUTONOMY & PERFORMANCE DOMAIN (2)

(Expectations about oneself and the environment that interfere with one's perceived ability to separate, survive, function independently, or perform successfully. Typical family origin is enmeshed, undermining of child's confidence, overprotective, or failing to reinforce child for performing competently outside the family.)

6. **DEPENDENCE / INCOMPETENCE** (DI)

Belief that one is unable to handle one's *everyday responsibilities* in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions). Often presents as helplessness.

7. **VULNERABILITY TO HARM OR ILLNESS** (Random Events) (VH)

Exaggerated fear that "random" catastrophe could strike at any time and that one will be unable to prevent it. Fears focus on one or more of the following: (A) *Medical*: e.g., heart attack, AIDS; (B) *Emotional*: e.g., go crazy; (C) *Natural / Phobic*: elevators, crime, airplanes, earthquakes.

8. **ENMESHMENT / UNDEVELOPED SELF** (EM)

Excessive emotional involvement and closeness with one or more significant others (often parents), at the expense of full individuation or normal social development. Often involves the belief that at least one of the enmeshed individuals cannot survive or be happy without the constant support of the other. May also include feelings of being smothered by, or fused with, others OR insufficient individual identity. Often experienced as a feeling of emptiness and floundering, having no direction, or in extreme cases questioning one's existence.

9. **FAILURE** (FA)

The belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of *achievement* (school, career, sports, etc.). Often involves beliefs that one is stupid, inept, untalented, ignorant, lower in status, less successful than others, etc.

IMPAIRED LIMITS DOMAIN (3)

(Deficiency in internal limits, responsibility to others, or long-term goal-orientation. Leads to difficulty respecting the rights of others, cooperating with others, making commitments, or setting and meeting realistic personal goals. Typical family origin is characterized by 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. In some cases, child may not have been pushed to tolerate normal levels of discomfort, or may not have been given adequate supervision, direction, or guidance.)

10. **ENTITLEMENT / GRANDIOSITY** (ET)

The belief that one is superior to other people; entitled to special rights and privileges; or not bound by the rules of reciprocity that guide normal social interaction. Often involves insistence that one should be able to do or have whatever one wants, regardless of what is realistic, what others consider reasonable, or the cost to others; OR an exaggerated focus on superiority (e.g., being among the most successful, famous, wealthy) -- in order to achieve *power* or *control* (not primarily for attention or approval). Sometimes includes excessive competitiveness toward, or domination of, others: asserting one's power, forcing one's point of view, or controlling the behavior of others in line with one's own desires---without empathy or concern for others' needs or feelings.

11. **INSUFFICIENT SELF-CONTROL / SELF-DISCIPLINE** (IS)

Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one's personal goals, or to restrain the excessive expression of one's emotions and impulses. In its milder form, patient presents with an exaggerated emphasis on **discomfort-avoidance**: avoiding pain, conflict, confrontation, responsibility, or overexertion---at the expense of personal fulfillment, commitment, or integrity.

OTHER-DIRECTEDNESS DOMAIN (4)

(An excessive focus on the desires, feelings, and responses of others, at the expense of one's own needs -- in order to gain love and approval, maintain one's sense of connection, or avoid retaliation. Usually involves suppression and lack of awareness regarding one's own anger and natural inclinations. Typical family origin is based on conditional acceptance: children must suppress important aspects of themselves in order to gain love, attention, and approval. In many such families, the parents' emotional needs and desires -- or social acceptance and status -- are valued more than the unique needs and feelings of each child.)

12. **SUBJUGATION** (SB)

Excessive surrendering of control to others because one feels *coerced* - - usually to avoid anger, retaliation, or abandonment. The two major forms of subjugation are:

A. *Subjugation of Needs*: Suppression of one's preferences, decisions, and desires.

B. *Subjugation of Emotions*: Suppression of emotional expression, especially anger.

Usually involves the perception that one's own desires, opinions, and feelings are not valid or important to others. Frequently presents as excessive compliance, combined with hypersensitivity to feeling trapped. Generally leads to a build up of anger, manifested in maladaptive symptoms (e.g., passive-aggressive behavior, uncontrolled outbursts of temper, psychosomatic symptoms, withdrawal of affection, "acting out", substance abuse).

13. **SELF-SACRIFICE** (SS)

Excessive focus on *voluntarily* meeting the needs of others in daily situations, at the expense of one's own gratification. The most common reasons are: to prevent causing pain to others; to avoid guilt from feeling selfish; or to maintain the connection with others perceived as needy. Often results from an acute sensitivity to the pain of others. Sometimes leads to a sense that one's own needs are not being adequately met and to resentment of those who are taken care of. (Overlaps with concept of co-dependency.)

14. **APPROVAL-SEEKING / RECOGNITION-SEEKING** (AS)

Excessive emphasis on gaining approval, recognition, or attention from other people, or fitting in, at the expense of developing a secure and true sense of self. One's sense of esteem is dependent primarily on the reactions of others rather than on one's own natural inclinations. Sometimes includes an overemphasis on status, appearance, social acceptance, money, or

achievement -- as means of gaining *approval, admiration,* or *attention* (not primarily for power or control). Frequently results in major life decisions that are inauthentic or unsatisfying; or in hypersensitivity to rejection.

OVERVIGILANCE & INHIBITION DOMAIN (5)

(Excessive emphasis on controlling one's spontaneous feelings, impulses, and choices in order to avoid making mistakes OR on meeting rigid, internalized rules and expectations about performance and ethical behavior -- often at the expense of happiness, self-expression, relaxation, close relationships, or health. Typical family origin is grim (and sometimes punitive): performance, duty, perfectionism, following rules, and avoiding mistakes predominate over pleasure, joy, and relaxation. There is usually an undercurrent of pessimism and worry---that things could fall apart if one fails to be vigilant and careful at all times.)

15. **NEGATIVITY / VULNERABILITY TO ERROR** (Controllable Events) (NS)

A pervasive, lifelong focus on the negative aspects of life (pain, death, loss, disappointment, conflict, guilt, resentment, unsolved problems, potential mistakes, betrayal, things that could go wrong, etc.) while minimizing or neglecting the positive or optimistic aspects OR an exaggerated expectation-- in a wide range of work, financial, or interpersonal situations that are typically viewed as "controllable"-- that things will go seriously wrong, or that aspects of one's life that seem to be going well will fall apart at any time. Usually involves an inordinate fear of making mistakes that might lead to: financial collapse, loss, humiliation, being trapped in a bad situation, or loss of control. Because potential negative outcomes are exaggerated, these patients are frequently characterized by chronic worry, vigilance, pessimism, complaining, or indecision.

16. **OVERCONTROL / EMOTIONAL INHIBITION** (EI)

The excessive inhibition of spontaneous action, feeling, or communication -- usually to create a sense of security and predictability; or to avoid making mistakes, disapproval by others, catastrophe and chaos, or losing control of one's impulses. The most common areas of excessive control involve: (a) inhibition of *anger* & aggression; (b) compulsive *order* & planning; (c) inhibition of *positive impulses* (e.g., joy, affection, sexual excitement, play); (d) excessive adherence to routine or ritual; (e) difficulty expressing *vulnerability* or *communicating* freely about one's feelings, needs, etc.; or (f)excessive emphasis on *rationality* while disregarding emotional needs. Often the overcontrol is extended to others in the patient's environment.

17. **UNRELENTING STANDARDS/HYPERCRITICALNESS**

(US)

The underlying belief that one must strive to meet very high *internalized standards* of behavior and performance, usually to avoid criticism. Typically results in feelings of pressure or difficulty slowing down; and in hypercriticalness toward oneself and others. Must involve significant impairment in: pleasure, relaxation, health, self-esteem, sense of accomplishment, or satisfying relationships.

Unrelenting standards typically present as: (a) ***perfectionism,*** inordinate attention to detail, or an underestimate of how good one's own performance is relative to the norm; (b) ***rigid rules*** and "shoulds" in many areas of life, including unrealistically high moral, ethical, cultural, or religious precepts; or (c) preoccupation with ***time and efficiency***, so that more can be accomplished.

18. **PUNITIVENESS** (PU)

The belief that people should be harshly punished for making mistakes. Involves the tendency to be angry, intolerant, punitive, and impatient with those people (including oneself) who do not meet one's expectations or standards. Usually includes difficulty forgiving mistakes in oneself or others, because of a reluctance to consider extenuating circumstances, allow for human imperfection, or empathize with feelings.

A.5 Last and Bruhn's (1992) CEMSS-R Object Relations categories

OBJECT RELATIONS

A. Perception of Others (includes people and animals)

1. Others are not present or are on the periphery of the action. Others may be mentioned as an afterthought.

2. Others are present, yet are primarily aggressive toward the subject and/or need frustrators.

3. Others are present and are primarily benign or need satisfiers.

   Note: When several characters are present, if <u>anyone</u> is aggressive toward the subject or a need frustrator, score "2".

B. Perception of Self

1. The subject demonstrates no mastery over the environment. He is primarily passive. He is a follower, an observer, a recipient, or a victim. He is acted on by the environment.

2. The subject attempts to influence the environment; there is an effort at mastery or control yet success is minimal at best.

3. The subject acts upon the environment. He initiates activity or participates in an activity as a full member. Efforts are mostly (though not necessarily exclusively) effective.

C Perception of Environment

1 The environment is primarily unsupportive or unsafe. It acts to limit, attack, or deprive the subject. (If the EM is one in which the subject observes others, rate this dimension in terms of the effect of the environment on the main character. A score of "1" is also given if the subject acts in an aversive manner.)

2. The environment is generally frustrating, yet there are sources (self, others, or circumstances) which function to mitigate the difficulty to varying degrees (e.g., "I got hurt and they took me to the hospital.")

3 The environment is primarily supportive, safe, or caring. (The subject may not necessarily appreciate the caring, such as being given medicine.)

D Individual Distinctiveness

1. Others are poorly defined, vague, or unclear. (If there are no others, also score "1".)

2. There is some distinctiveness, yet individuals are not embellished with specific qualities (e.g., motivation, appearance, tastes, or even a specific location). Also score "2" for an EM in which there is group activity without any indication of specific roles.

3. Others are highly distinctive with specific qualities or characteristics. Individuals must be more than just named (e.g., Mum, Bill) to be scored "3".

E Degree of Interpersonal Contact

1 Subject and others are alone or isolated, with no interaction. Subject may be passive observer. (If there are no others, also score "1".)

2 There is only moderate interaction portrayed. Interaction is sporadic or momentary. Also includes a series of brief encounters with different individuals.

3 Sustained interaction is reported or clearly implied. (The interaction need not be satisfying.)

OBJECT RELATIONS EXAMPLES:

I remember falling off my bike when I was five. I cut myself real bad.
A=1, B=2, C=1, D=1, E=1.

I was in a fight with my cousin, he beat me up. He had me down, and I couldn't get up. He was real strong and used to take karate. A=2, B=1, C=1, D=3, E=3.

When I was 5, I caught my finger in a door; my mother came over and helped me get it free. We had to go to the hospital. It hurt for a week. A=3, B=1, C=2, D=2, E=3.

My cousin, Bill, asked me to play marbles with him. We played all day until dinner.
A=3, B=1, C=3, D=2, E=2.

My mother gave me a bowl of cereal and I didn't like it so I threw it away. A=2, B=3, C=2, D=2, E=2.
When I was 3 my mother gave me this 21 piece puzzle. We figured it out together. She always gave me something good.
A=3, B=3, D=3, E=3.

A.6   Study 1 Frequencies

Table A1

Frequency in Percentages of Type of Memory for each Early Memory

Memory	Neutral Memory	Negative Memory	Positive Memory
Early Memory 1			
Men (n = 51)	23%	53%	23%
Women (n = 198)	6%	57%	37%
Early Memory 2			
Men (n = 51)	22%	47%	31%
Women (n = 198)	12%	54%	33%
Early Memory Mother			
Men(n = 51)	26%	31%	43%
Women (n = 198)	20%	39%	41%
Early Memory Father			
Men (n = 51)	31%	20%	49%
Women (n = 198)	23%	35%	42%

N = 249

Table A2

Frequencies in Percentages of Maladaptive Schemas that were present in Early Memory 1

for Men and Women

Maladaptive Schemas	Men % (*n* = 50)	Women % (*n* = 198)
Emotional Deprivation	29%	26%
Abandonment	25%	25%
Mistrust Abuse	14%	17%
Social Isolation / Alienation	12%	8%
Defectiveness /Shame	6%	11%
Failure	6%	4%
Dependency /Incompetence	10%	14%
Vulnerability to Harm	35%	17%
Enmeshment / Undeveloped Self	2%	6%
Subjugation	8%	9%
Self-Sacrifice	2%	6%
Emotional Inhibition	4%	3%
Unrelenting Standards	6%	3%
Entitlement	4%	11%
Insufficient Self-Control/Self-Discipline	4%	9%
Approval-Seeking / Recognition -Seeking	4%	7%
Negativity / Pessimism	-	7%
Punitiveness	4%	2%

N = 248

Table A3

Frequencies in Percentages of Maladaptive Schemas present in Early Memory 2 for Men

and Women

Maladaptive Schemas	Men % (n = 50)	Women % (n = 198)
Emotional Deprivation	8%	22%
Abandonment	8%	22%
Mistrust Abuse	6%	12%
Social Isolation / Alienation	12%	11%
Defectiveness /Shame	6%	16%
Failure	4%	5%
Dependency /Incompetence	14%	11%
Vulnerability to Harm	23%	22%
Enmeshment / Undeveloped Self	-	3%
Subjugation	6%	7%
Self-Sacrifice	2%	6%
Emotional Inhibition	4%	2%
Unrelenting Standards	12%	6%
Entitlement	12%	12%
Insufficient Self-Control / Self-Discipline	10%	9%
Approval-Seeking / Recognition -Seeking	6%	5%
Negativity / Pessimism	14%	6%
Punitiveness	-	2%

N = 248

Table A4

Frequencies in Percentages of Maladaptive Schemas present in Early Memory of Mother

for Men and Women

Maladaptive Schemas	Men % *(n = 50)*	Women % (*n* = 198)
Emotional Deprivation	25%	16%
Abandonment	23%	20%
Mistrust Abuse	6%	8%
Social Isolation / Alienation	4%	2%
Defectiveness /Shame	2%	7%
Failure	-	3%
Dependency /Incompetence	20%	17%
Vulnerability to Harm	14%	12%
Enmeshment / Undeveloped Self	10%	10%
Subjugation	2%	8%
Self-Sacrifice	-	6%
Emotional Inhibition	2%	2%
Unrelenting Standards	4%	3%
Entitlement	16%	5%
Insufficient Self-Control / Self-Discipline	6%	6%
Approval-Seeking / Recognition -Seeking	2%	3%
Negativity / Pessimism	-	4%
Punitiveness	2%	2%

N = 248

Table A5

Frequencies in percentages of Maladaptive Schemas present in Early Memory of Father

for Men and Women

Maladaptive Schemas	Men % (n = 50)	Women % (n = 198)
Emotional Deprivation	22%	20%
Abandonment	16%	19%
Mistrust Abuse	6%	11%
Social Isolation / Alienation	2%	2%
Defectiveness /Shame	2%	8%
Failure	4%	3%
Dependency /Incompetence	12%	7%
Vulnerability to Harm	6%	12%
Enmeshment / Undeveloped Self	12%	7%
Subjugation	-	7%
Self-Sacrifice	2%	5%
Emotional Inhibition	2%	3%
Unrelenting Standards	8%	5%
Entitlement	14%	7%
Insufficient Self-Control / Self-Discipline	2%	5%
Approval-Seeking / Recognition -Seeking	4%	4%
Negativity / Pessimism	2%	4%
Punitiveness	-	2%

N = 248

Table A6

Frequencies in Percentages of Self-Reported Current Maladaptive Schemas from YSQ

(Young, 1998) for Men and Women

Maladaptive Schemas	Men % (*n* = 51)	Women % (*n* = 198)
Emotional Deprivation	39%	37%
Abandonment	46%	53%
Mistrust Abuse	55%	56%
Social Isolation / Alienation	47%	46%
Defectiveness /Shame	23%	20%
Failure	21%	35%
Dependency /Incompetence	23%	20%
Vulnerability to Harm	35%	35%
Enmeshment / Undeveloped Self	22%	24%
Subjugation	35%	35%
Self-Sacrifice	84%	93%
Emotional Inhibition	51%	41%
Unrelenting Standards	82%	88%
Entitlement	84%	69%
Insufficient Self-Control / Self-Discipline	78%	70%

N = 249

A 7 ANALYSES FOR STUDY 1   PART 1

Table A7.1   *Descriptive Statistics for Counterbalanced groups*

YSQ-S Subscales	Counterbalancing	Mean	Std. Deviation	N
Emotional Deprivation	Blue Memory-first	10.07	5.551	107
	Green Memory-second	10.48	5.413	108
Abandonment	Blue Memory-first	11.85	6.096	107
	Green Memory-second	12.84	6.754	108
Mistrust Abuse	Blue Memory-first	11.94	5.121	107
	Green Memory-second	12.10	5.469	108
Social Isolation	Blue Memory-first	10.93	5.540	107
	Green Memory-second	11.31	4.810	108
Defective Shame	Blue Memory-first	8.27	4.233	107
	Green Memory-second	8.25	4.703	108
failure	Blue Memory-first	9.46	4.312	107
	Green Memory-second	9.56	4.586	108
dependence Incompetence	Blue Memory-first	8.26	3.750	107
	Green Memory-second	9.12	4.182	108
Vulnerability to harm or illness	Blue Memory-first	10.00	4.537	107
	Green Memory-second	10.24	4.891	108
Enmeshment	Blue Memory-first	8.24	3.608	107
	Green Memory-second	8.61	4.002	108
Subjugation	Blue Memory-first	10.00	4.537	107
	Green Memory-second	10.24	4.891	108
Self sacrifice	Blue Memory-first	16.59	4.932	107
	Green Memory-second	17.01	4.342	108
Emotional Inhibition	Blue Memory-first	10.18	4.491	107
	Green Memory-second	10.17	4.454	108
Unrelenting Standards Hypercriticalness	Blue Memory-first	17.63	5.977	107
	Green Memory-second	17.41	5.695	108
Entitlement Grandiosity	Blue Memory-first	13.33	4.694	107
	Green Memory-second	13.44	4.934	108
Insufficient Self-Control	Blue Memory-first	13.00	4.841	107
	Green Memory-second	13.90	5.143	108
YSQ Total Score	Blue Memory-first	169.26	40.011	107
	Green Memory-second	173.88	43.020	108

Early Memory Total Scores for Counterbalanced Groups		Means	Standard Deviations	*n*
EM 1 Total	Blue Memory-first	4.26	3.658	107
	Green Memory-second	4.29	3.661	108
Em Mother total	Blue Memory-first	1.27	2.471	107
	Green Memory-second	1.26	2.281	108
Em father total	Blue Memory-first	.33	1.026	107
	Green Memory-second	.33	1.041	108
Early Memory Total Score	Blue Memory-first	15.11	10.432	107
	Green Memory-second	14.93	9.122	108
Early Memory First Object Relations sub-total	Blue Memory-first	10.29	2.027	107
	Green Memory-second	10.52	2.177	108
Early Memory Second Object Relations sub-total	Blue Memory-first	10.02	2.142	107
	Green Memory-second	10.08	2.200	108
Early Memory Mother Object Relations sub-total	Blue Memory-first	10.80	1.781	107
	Green Memory-second	10.76	2.117	108
Early Memory Father Object Relations sub-total	Blue Memory-first	10.96	1.784	107
	Green Memory-second	10.70	1.781	108
Early Memory Object Relations Total	Blue Memory-first	42.13	5.178	107
	Green Memory-second	41.85	5.431	108
Early Memory Total Type of Memory	Blue Memory-first	5.15	1.510	107
	Green Memory-second	5.06	1.433	108
EM 2 total	Blue Memory-first	4.66	4.155	107
	Green Memory-second	4.01	3.411	108

N = 215

MANOVA results for Counterbalanced Groups

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
counterb	Pillai's Trace	.082	.642(a)	26.000	188.000	.909
	Wilks' Lambda	.918	.642(a)	26.000	188.000	.909
	Hotelling's Trace	.089	.642(a)	26.000	188.000	.909
	Roy's Largest Root	.089	.642(a)	26.000	188.000	.909

N = 215 a Exact statistic

A7.2 *Chronbach's Alpha for the YSQ-S (Young, 1998)*

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q1	8.3896	20.1420	.7556	.6129	.8591
Q2	8.4578	20.1524	.7573	.6151	.8588
Q3	8.4257	20.3745	.7330	.5728	.8642
Q4	8.1124	19.2050	.7692	.6143	.8555
Q5	8.1727	20.5870	.6411	.4152	.8856

Reliability Coefficients   5 items Alpha = .8888   Standardized item alpha = .8897

Q6	9.7390	25.8872	.8421	.7616	.8968
Q7	9.7711	25.9837	.8512	.7784	.8950
Q8	9.8434	25.0520	.8875	.7978	.8872
Q9	9.7390	27.8388	.7434	.5574	.9162
Q10	10.2892	29.3112	.6769	.4808	.9280

Alpha = .9230   Standardized item alpha = .9219

Q11	9.7028	20.2904	.6662	.4879	.8769
Q12	9.9518	19.3041	.7405	.5849	.8604
Q13	10.0321	19.7812	.7310	.5773	.8628
Q14	9.5944	18.8066	.7691	.7467	.8536
Q15	9.5863	18.8726	.7324	.7257	.8625

Alpha = .8877   Standardized item alpha = .8877

Q16	8.8112	18.0570	.8267	.6840	.8882
Q17	8.5341	18.3627	.6514	.4471	.9261
Q18	9.1446	17.8339	.8158	.6887	.8899
Q19	9.1807	18.0680	.8280	.7215	.8880
Q20	8.8434	17.6165	.8166	.7006	.8895

Alpha = .9154   Standardized item alpha = .9180

Q21	6.4819	12.8878	.7996	.7149	.9071
Q22	6.5181	12.5168	.8265	.7441	.9019
Q23	6.7671	13.5020	.7778	.6380	.9111
Q24	6.7229	13.0640	.8495	.7412	.8974
Q25	6.6667	13.7634	.7596	.6103	.9146

Alpha = .9238   Standardized item alpha = .9242

Q26	7.6506	12.5186	.7674	.5941	.9084
Q27	7.8153	13.3448	.7060	.5289	.9196
Q28	7.5301	11.9033	.8638	.7742	.8884
Q29	7.5663	12.3272	.8583	.7747	.8902
Q30	7.6546	12.6947	.7814	.6569	.9054

Alpha = .9207   Standardized item alpha = .9205

Q31	7.0602	10.9359	.6061	.4349	.7485
Q32	6.4418	9.1589	.4708	.2383	.8493
Q33	7.2771	11.6366	.6609	.5978	.7407
Q34	7.2088	11.6659	.6938	.6457	.7350
Q35	7.1606	11.7886	.7084	.6109	.7347

Alpha = .7964   Standardized item alpha = .8442

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q36	7.4498	11.6033	.6703	.5186	.7586
Q37	7.5382	11.1447	.7176	.5747	.7427
Q38	7.4016	12.1284	.5767	.3625	.7880
Q39	7.8032	13.5781	.4899	.2716	.8102
Q40	7.7992	12.6208	.5729	.3450	.7883

Alpha = .8151   Standardized item alpha = .8133

Q41	6.6867	10.5870	.5473	.3830	.7282
Q42	6.7430	10.1998	.6282	.4581	.6985
Q43	6.7791	11.3018	.4970	.2807	.7447
Q44	6.9839	10.9272	.5786	.4647	.7179
Q45	6.9759	11.5720	.4653	.3836	.7548

Alpha = .7714   Standardized item alpha = .7710

Q46	8.4137	17.5984	.3901	.1781	.8533
Q47	8.1365	14.6184	.7517	.5790	.7525
Q48	7.9317	14.7252	.6552	.4880	.7806
Q49	8.3775	15.8247	.6896	.5166	.7744
Q50	8.0402	14.8452	.6478	.4721	.7829

Alpha = .8254   Standardized item alpha = .8274

Q51	13.0884	15.6293	.5460	.3293	.8083
Q52	13.1647	16.1623	.6052	.4203	.7881
Q53	13.8876	15.3825	.7283	.5597	.7538
Q54	12.5703	15.5606	.6052	.3780	.7882
Q55	14.1165	16.2323	.6011	.4119	.7892

Alpha = .8209   Standardized item alpha = .8242

Q56	8.2851	13.7692	.6702	.5301	.7927
Q57	8.0884	12.9035	.7121	.5866	.7801
Q58	8.3494	14.2928	.6576	.4624	.7969
Q59	8.3574	14.9322	.5473	.3856	.8264
Q60	8.4940	14.9445	.6002	.4246	.8124

Alpha = .8355   Standardized item alpha = .8352

Q61	14.4337	23.5692	.6422	.4928	.8315
Q62	13.8032	22.9087	.7345	.5979	.8064
Q63	13.3574	24.8354	.6613	.4607	.8266
Q64	13.6707	23.8830	.6465	.4756	.8299
Q65	13.8755	23.9401	.6577	.4875	.8268

Alpha = .8544   Standardized item alpha = .8550

Q66	10.5944	16.8872	.4523	.2263	.7840
Q67	11.2530	15.8430	.6868	.5571	.7054
Q68	9.5301	15.7824	.5810	.3451	.7388
Q69	11.3414	15.5725	.6681	.5397	.7092
Q70	11.2570	18.3369	.4442	.2240	.7801

Alpha = .7853   Standardized item alpha = .7876

Q71	10.5622	16.8358	.5921	.3685	.8029
Q72	11.1446	18.2209	.6242	.3920	.7936
Q73	10.7871	16.9021	.6148	.3804	.7951
Q74	10.9197	17.1790	.6749	.4579	.7781
Q75	10.9639	17.2608	.6205	.4067	.7930

Alpha = .8268   Standardized item alpha = .8293

A7.3 *Descriptive Statistics for YSQ-S (Young, 1990)*

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness statistic	Skewness Standard error	Kurtosis Statistic	Kurtosis Standard error
Emotional Deprivation	249	5	29	10.39	5.527	1.220	.156	.905	.310
Abandonment	249	5	30	12.35	6.411	.887	.156	-.152	.310
Mistrust Abuse	249	5	30	12.22	5.431	.945	.156	.511	.310
Social Isolation	249	0	30	11.13	5.246	1.234	.156	1.889	.310
Defective Shame	249	0	30	8.29	4.490	2.044	.156	5.135	.310
failure	249	0	30	9.55	4.386	1.355	.156	2.735	.310
dependence Incompetence	249	0	30	8.79	4.051	1.567	.156	4.172	.310
Vulnerability to harm or illness	249	0	30	10.22	4.821	1.231	.156	1.301	.310
Enmeshment	249	0	25	8.54	4.017	1.649	.156	3.147	.310
Subjugation	249	0	30	10.22	4.821	1.231	.156	1.301	.310
Self sacrifice	249	0	29	16.71	4.860	.293	.156	-.327	.310
Emotional Inhibition	249	0	24	10.39	4.611	.614	.156	-.394	.310
Unrelenting Standards Hypercriticalness	249	0	30	17.29	5.994	.153	.156	-.728	.310
Entitlement Grandiosity	249	0	28	13.49	4.944	.681	.156	.041	.310
Insufficient Self-Control	249	0	28	13.59	5.087	.563	.156	.090	.310
Valid N (listwise)	249								

N = 249

A7.4 *Descriptive Statistics for Men's and Women's YSQ-S (Young, 1998) and Early Memory Variables*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maxim
					Lower Bound	Upper Bound		
male	51	169.94	42.270	5.919	158.05	181.83	98	
female	198	173.10	44.475	3.161	166.86	179.33	78	
Total	249	172.45	43.967	2.786	166.96	177.94	78	

N = 249

ANOVA on the YSQ Total Score for Men and Women

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	403.622	1	403.622	.208	.649
Within Groups	479006.000	247	1939.296		
Total	479409.622	248			

N = 249

MANOVA on Men's and Women's scores on the subscales of YSQ-S

Effect		Value	F	Hypothesis df	Error df	Sig.
	Wilks' Lambda	.843	3.114(a)	14.000	234.000	.000
	Hotelling's Trace	.186	3.114(a)	14.000	234.000	.000
	Roy's Largest Root	.186	3.114(a)	14.000	234.000	.000

N = 249 Note: a = Exact statistic

Manova Tests of Between-Subjects Effects for Men and Women on the YSQ-S Subscales

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	Emotional Deprivation	50.228	1	50.228	1.649	.200
	Abandonment	76.267	1	76.267	1.862	.174
	Mistrust Abuse	.383	1	.383	.013	.910
	Social Isolation	30.981	1	30.981	1.126	.290
	Defective Shame	4.331	1	4.331	.214	.644
	failure	22.586	1	22.586	1.175	.279
	dependence Incompetence	69.644	1	69.644	4.300	.039
	Vulnerability to harm or illness	11.366	1	11.366	.488	.485
	Enmeshment	16.224	1	16.224	1.005	.317
	Subjugation	11.366	1	11.366	.488	.485
	Self sacrifice	165.998	1	165.998	7.204	.008
	Emotional Inhibition	66.491	1	66.491	3.154	.077
	Unrelenting Standards Hypercriticalness	129.761	1	129.761	3.651	.057
	Entitlement Grandiosity	141.705	1	141.705	5.912	.016
	Insufficient Self-Control	51.469	1	51.469	1.997	.159

a R Squared = .007 (Adjusted R Squared = .003)
b R Squared = .000 (Adjusted R Squared = -.004)
c R Squared = .005 (Adjusted R Squared = .001)
d R Squared = .001 (Adjusted R Squared = -.003)
e R Squared = .017 (Adjusted R Squared = .013)
f R Squared = .002 (Adjusted R Squared = -.002)
g R Squared = .004 (Adjusted R Squared = .000)
h R Squared = .028 (Adjusted R Squared = .024)
i R Squared = .013 (Adjusted R Squared = .009)
j R Squared = .015 (Adjusted R Squared = .011)
k R Squared = .023 (Adjusted R Squared = .019)
l R Squared = .008 (Adjusted R Squared = .004)

MANOVA of Gender and Young's schemas represented in First Early Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
gender	Pillai's Trace	.100	1.415(a)	18.000	228.000	.126	.100
	Wilks' Lambda	.900	1.415(a)	18.000	228.000	.126	.100
	Hotelling's Trace	.112	1.415(a)	18.000	228.000	.126	.100
	Roy's Largest Root	.112	1.415(a)	18.000	228.000	.126	.100

MANOVA of Gender and Young's schemas represented in Second Early Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
gender	Pillai's Trace	.070	.932(a)	18.000	222.000	.540	.070
	Wilks' Lambda	.930	.932(a)	18.000	222.000	.540	.070
	Hotelling's Trace	.076	.932(a)	18.000	222.000	.540	.070
	Roy's Largest Root	.076	.932(a)	18.000	222.000	.540	.070

MANOVA of Gender and Young's schemas represented in Early Memory of Mother

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
gender	Pillai's Trace	.081	1.001(a)	18.000	203.000	.461	.081
	Wilks' Lambda	.919	1.001(a)	18.000	203.000	.461	.081
	Hotelling's Trace	.089	1.001(a)	18.000	203.000	.461	.081
	Roy's Largest Root	.089	1.001(a)	18.000	203.000	.461	.081

MANOVA of Gender and Young's schemas represented in Early Memory of Father

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
gender	Pillai's Trace	.087	1.048(a)	18.000	198.000	.409	.087
	Wilks' Lambda	.913	1.048(a)	18.000	198.000	.409	.087
	Hotelling's Trace	.095	1.048(a)	18.000	198.000	.409	.087
	Roy's Largest Root	.095	1.048(a)	18.000	198.000	.409	.087

MANOVA of Gender and Object Relations Themes represented in First Early Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.033	1.628(a)	5.000	241.000	.153	.033
	Wilks' Lambda	.967	1.628(a)	5.000	241.000	.153	.033
	Hotelling's Trace	.034	1.628(a)	5.000	241.000	.153	.033
	Roy's Largest Root	.034	1.628(a)	5.000	241.000	.153	.033

MANOVA of Gender and Object Relations Themes represented in Second Early Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.032	1.558(a)	5.000	235.000	.173	.032
	Wilks' Lambda	.968	1.558(a)	5.000	235.000	.173	.032
	Hotelling's Trace	.033	1.558(a)	5.000	235.000	.173	.032
	Roy's Largest Root	.033	1.558(a)	5.000	235.000	.173	.032

MANOVA of Gender and Object Relations Themes represented in Early Memory of Mother

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.017	.752(a)	5.000	216.000	.586	.017
	Wilks' Lambda	.983	.752(a)	5.000	216.000	.586	.017
	Hotelling's Trace	.017	.752(a)	5.000	216.000	.586	.017
	Roy's Largest Root	.017	.752(a)	5.000	216.000	.586	.017

MANOVA of Gender and Object Relations Themes represented in Early Memory of Father

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
sex	Pillai's Trace	.021	.924(a)	5.000	211.000	.466	.021
	Wilks' Lambda	.979	.924(a)	5.000	211.000	.466	.021
	Hotelling's Trace	.022	.924(a)	5.000	211.000	.466	.021
	Roy's Largest Root	.022	.924(a)	5.000	211.000	.466	.021

Descriptive Statistics for Young's schemas represented in First Early Memory for Men and Women

	sex	Mean	Std. Deviation	N
EM1 Emotional Deprivation	male	.88	1.409	49
	female	.73	1.256	198
EM1 Abandonment	male	.88	1.481	49
	female	.67	1.258	198
EM1 Mistrust/Abuse	male	.35	.948	49
	female	.47	1.102	198
EM1 Social isolation/Alienation	male	.27	.811	49
	female	.16	.591	198
EM1 Defectiveness/Shame	male	.20	.816	49
	female	.30	.884	198
EM1 Failure	male	.14	.612	49
	female	.11	.541	198
EM1 Dependence/Incompetence	male	.33	.922	49
	female	.36	.923	198
EM1 Vulnerability to harm or illness	male	.96	1.399	49
	female	.46	1.069	198
EM1 Emeshment/Undeveloped Self	male	.04	.286	49
	female	.14	.567	198
EM1 Subjugation	male	.16	.553	49
	female	.23	.783	198
EM1 Self-Sacrifice	male	.06	.429	49
	female	.14	.588	198
EM1 Overcontrol/Emotional Inhibition	male	.08	.449	49
	female	.08	.450	198
EM1 Unrelenting Standards/Hypercriticalness	male	.16	.717	49
	female	.06	.411	198
EM1 Entitlement/Grandiosity	male	.08	.400	49
	female	.24	.698	198
EM1 Insufficient Self-Control/Self Discipline	male	.10	.510	49
	female	.22	.682	198
EM1 Approval-Seeking/Recognition-Seeking	male	.10	.510	49
	female	.18	.671	198
EM1 Negativity/Pessimism	male	.00	.000	49
	female	.17	.622	198
EM1 Punitiveness	male	.12	.634	49
	female	.05	.323	198

N = 247

A 7.5 *Results for Part 2: Factor Analysis of the YSQ-S (Young, 1998)*

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Bartlett's Test of Sphericity	Approx. Chi-Square	13712.713
	df	2775
	Sig.	.000

Goodness-of-fit Test

Chi-Square	df	Sig.
2520.371	1755	.000

Total Variance Explained for the YSQ-S

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	19.452	25.936	25.936	18.859	25.145	25.145	5.245
2	4.703	6.271	32.207	3.445	4.594	29.739	7.626
3	4.517	6.022	38.230	3.941	5.255	34.994	8.840
4	3.644	4.859	43.089	3.546	4.729	39.723	3.049
5	3.072	4.096	47.185	1.924	2.565	42.288	5.984
6	2.520	3.360	50.546	2.974	3.965	46.253	4.997
7	2.211	2.948	53.494	1.849	2.465	48.718	9.768
8	1.990	2.653	56.147	1.936	2.582	51.300	4.013
9	1.870	2.494	58.640	1.636	2.182	53.482	6.437
10	1.795	2.394	61.034	1.553	2.070	55.552	9.864
11	1.708	2.277	63.311	1.492	1.989	57.541	7.292
12	1.620	2.160	65.471	1.310	1.747	59.288	6.031
13	1.441	1.921	67.392	1.346	1.795	61.083	4.629
14	1.332	1.777	69.169	.917	1.222	62.305	5.070
15	1.147	1.529	70.698	.924	1.233	63.537	2.443

Extraction Method: Maximum Likelihood.
a When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

A 7.6 .Pattern Matrix for YSQ-S

Pattern Matrix [a]

	Factor														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
q23	.622	-.02	.099	-.077	.070	.035	.196	-.071	.044	.082	.014	.134	.026	-.048	-.065
q22	.548	.075	.130	-.030	-.010	.074	.192	-.045	.039	.191	.181	-.052	-.004	-.041	.083
q24	.534	.058	.011	-.143	.037	.106	.236	-.087	.130	.170	-.005	.099	.107	-.077	.040
q21	.502	.035	.146	-.029	-.009	.036	.182	-.006	-.082	.194	.248	-.019	.056	.042	.131
q25	.397	.132	-.087	-.103	.051	-.025	.157	-.077	.093	.190	.093	.260	.221	-.089	.046
q14	-.049	.978	-.020	-.086	.025	-.011	-.025	-.008	.074	.030	-.070	-.074	.004	.087	.056
q15	.007	.852	.007	-.011	.047	-.038	.038	-.010	-.002	.00	.002	-.071	.066	.049	.009
q13	.020	.495	.167	.093	.002	.064	.053	.010	-.090	.089	.167	.156	-.131	-.027	-.053
q12	.119	.442	.184	.090	.074	.075	.097	.043	.115	.148	.137	.041	-.101	-.100	-.121
q11	.012	.404	.187	.044	-.038	.197	.083	.027	.009	.149	-.003	.216	.001	-.067	-.201
q7	.000	.036	.895	-.039	-.043	-.017	.039	-.003	.037	-.022	-.004	-.040	.001	.004	.054
q8	.018	.097	.891	-.009	.026	.044	-.026	.038	.006	.010	-.021	.019	.003	-.005	-.016
q6	-.024	-.02	.883	.007	.047	.041	-.028	-.003	.067	-.003	-.021	-.032	.039	.034	-.021
q9	-.009	.008	.687	.029	.011	-.029	.015	-.054	-.060	.119	-.014	.003	.087	.090	.034
q10	.191	.068	.586	.048	.171	-.035	.044	-.004	.084	-.035	-.047	.015	.013	.108	-.005
q67	.080	-.03	-.004	.926	-.065	.021	.123	.027	.022	-.044	-.058	.010	-.037	.028	-.009
q69	-.035	-.09	.022	.806	.028	.023	.053	-.001	.027	.052	-.030	.039	.051	.016	-.046
q68	-.140	.053	.046	.466	-.073	-.051	-.090	-.158	-.018	.020	-.017	.037	.233	-.024	-.002
q70	-.092	.104	-.049	.465	.053	.101	-.114	.002	.020	.152	.072	-.022	.028	-.043	.076
q1	-.050	.012	.064	.062	.819	-.036	.078	-.012	-.144	.079	-.004	.026	-.002	-.060	-.040
q2	.031	.083	-.023	-.078	.764	-.062	-.032	-.136	.022	.048	-.017	.120	.013	.000	-.055
q4	.043	.017	.061	-.031	.684	.137	.023	.054	.068	.123	.038	.013	.001	-.030	-.054
q5	-.045	.024	-.025	.032	.643	.121	.050	.048	.024	.029	.060	-.008	.031	.040	-.009
q3	.116	.014	.237	-.092	.592	.096	.002	.031	.024	.130	.156	-.010	-.024	-.042	.008
q53	-.056	-.04	.052	.022	.124	.741	.017	-.069	-.019	-.013	.001	.123	-.044	.069	-.098
q52	-.019	.004	.081	.091	-.033	.713	-.013	.014	-.024	-.079	.036	.050	.034	-.103	.025
q54	.082	.017	-.078	.005	-.034	.671	-.028	-.052	.033	.041	-.044	-.142	.132	.067	.136
q55	-.049	.037	.076	-.013	.029	.629	.066	-.080	-.050	-.092	.023	.075	-.032	.003	-.016
q51	.106	.066	-.073	-.016	.146	.567	-.032	-.076	.031	-.014	-.022	-.074	-.026	.126	.080
q28	-.006	-.01	.018	.059	.035	-.052	.900	.036	.033	.041	.000	-.059	.019	.017	.026
q29	-.014	.000	-.039	-.001	.004	.061	.896	.041	.076	.020	.039	.014	-.012	-.023	.006
q30	.053	.094	.040	-.003	-.003	-.024	.838	-.036	.002	-.093	.012	-.090	-.040	.086	-.049
q26	.135	-.03	.019	.061	.058	.021	.639	-.026	-.003	.039	.071	.128	.010	.009	.048
q27	.209	.031	-.041	-.036	.091	-.027	.534	.037	.118	.140	-.076	-.008	.116	.021	.035
q62	.044	.003	-.007	.006	-.010	-.023	-.093	-.803	-.013	.046	-.001	.017	-.026	-.049	-.040
q63	-.071	-.07	.035	-.009	-.035	.158	-.016	-.734	-.006	.085	.003	-.119	-.095	-.046	-.027
q64	-.083	-.05	-.046	-.063	.087	.018	.082	-.716	-.010	-.025	.022	.122	.051	.183	.025
q61	.158	.134	.030	.102	-.103	-.044	-.079	-.699	-.030	-.047	.040	.001	.004	-.020	-.056
q65	.021	.005	-.016	.003	.078	.122	.118	-.676	.065	.026	.022	-.041	-.078	.048	.076
q66	-.025	.120	.140	.275	.054	-.101	-.006	-.300	-.091	-.163	.023	.112	.224	-.073	.177
q33	.068	.034	.033	.023	-.052	-.091	-.037	-.026	.829	.008	-.015	.087	.107	-.016	-.076
q34	-.002	.054	-.007	.006	.030	.043	.096	.022	.803	.017	-.009	.023	.046	-.034	-.066
q35	-.054	.019	.057	.034	-.003	-.003	.195	.052	.611	.109	.013	.011	.118	.081	.074
q32	-.022	-.03	.107	.050	-.028	.047	.038	.019	.368	-.030	.193	.038	-.092	.019	.185
q31	-.190	.018	.215	-.019	.032	-.129	.296	-.093	.341	.013	.105	.057	.008	.093	.243
q16	.072	.044	-.012	.047	.065	-.077	-.007	-.015	.006	.801	-.067	.031	.005	.086	.017
q19	.003	.032	.105	-.023	.046	-.028	.015	.012	.054	.775	.084	.018	.045	-.006	.036
q20	-.037	.037	.070	.059	.035	-.044	.071	-.052	-.046	.775	.054	.008	-.008	.089	.008
q18	.120	.063	-.032	.035	.132	-.006	.013	-.014	.007	.763	.018	-.117	.031	.012	.020
q17	.052	.130	-.020	.061	.192	-.121	-.018	-.077	.088	.532	-.025	.010	-.042	-.043	.085
q48	.015	-.04	.163	-.096	-.062	.277	.119	.014	.067	.298	.182	.132	-.002	.026	-.129
q50	.052	-.04	.113	-.098	-.081	.185	.092	-.013	.100	.265	.089	.243	.099	.104	-.198
q57	.012	.031	-.061	-.066	-.031	.005	.039	.025	.008	.039	.822	-.014	.069	.012	.049
q56	.062	-.01	-.043	.007	-.007	.077	.050	-.035	.054	.025	.734	.005	.016	-.003	.029
q58	-.069	.018	.096	-.029	.153	-.078	.030	-.106	.046	.010	.666	-.063	.117	-.105	.090
q59	.173	.060	-.148	.251	.253	-.082	-.043	-.051	.117	-.051	.422	-.036	-.051	.163	-.163
q60	.190	.097	-.001	-.016	.188	-.065	-.006	-.035	-.107	.048	.407	.115	.021	.181	-.063
q44	.050	.000	-.032	.118	.051	-.051	.042	.080	-.006	.022	-.061	.728	.058	.042	.179
q45	.031	-.05	.040	.023	.157	.015	-.110	-.003	.153	.004	.000	.555	.010	.120	.105
q46	.105	.038	.000	-.004	.013	.064	-.001	-.120	.221	-.035	-.048	.525	-.004	.026	.030
q47	.033	.119	.107	-.073	-.126	.293	.173	-.015	.062	.159	.168	.344	.012	.032	-.100
q49	-.127	.122	.152	-.045	-.002	.155	.173	.092	.126	.054	.118	.337	.029	.134	-.133
q74	.088	-.02	-.029	.106	.099	-.012	-.020	.025	.057	-.079	-.049	.040	.734	.045	.008
q75	.048	.065	.036	.024	.023	.106	.032	.075	-.022	-.113	-.036	.049	.669	-.021	.150
q71	-.038	-.06	-.021	.031	-.050	.001	-.009	.057	.140	.093	.051	-.037	.658	.034	-.094
q73	.007	.073	.083	.066	-.024	.029	-.040	-.035	-.091	.057	.137	-.062	.650	-.043	-.010
q72	-.038	-.01	.104	-.092	-.020	-.028	.098	.022	.072	.088	.077	.048	.623	.080	-.021
q37	-.075	.153	.038	.025	-.075	.135	.022	.040	-.120	.089	.179	.050	.095	.643	.004
q40	.039	.053	.216	.011	.013	-.019	.013	-.106	.074	.019	-.148	-.099	.011	.592	.076
q38	-.144	.020	.077	-.036	-.023	.120	.182	-.042	-.020	.074	.019	.080	.072	.494	-.051
q36	.012	.151	.174	.053	-.057	.161	.010	.007	.042	.024	.245	.111	.006	.440	.096
q39	.042	.001	-.025	-.015	.038	-.053	.087	-.036	.108	.078	-.033	.180	-.008	.433	.009
q41	.000	-.05	.103	.008	-.095	.048	.032	-.030	-.020	.110	.115	.106	.069	-.032	.688
q42	-.083	.131	-.093	.002	-.096	.093	.138	-.020	-.099	.009	-.022	.322	.144	-.022	.532
q43	.141	.009	.038	.033	-.096	.118	-.057	.079	.110	.005	.029	.077	-.120	.234	.463

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.
a.   Rotation converged in 17 iterations.

A 7.7   Result for Part 3: *Table 3.6 A comparison of Totals of Young's Maladaptive Schemas represented in all four   memories for the four YSQ-S Groups*

Total Early Childhood Memory Scores for each schema from all four memoies summed

Four YSQ groups		ED	MA	AB	SI	DS	DI	VH	EM	FA	SJ	SS	EI	US	ET	IS	AS	NS	PU
Lowest YSQ-S T-Score group(30-40)	N	11	10	11	11	11	11	11	11	10	11	11	11	11	11	11	11	11	11
	Sum	12.0	2.00	8.00	5.00	16	9.00	9.00	1.00	7.00	2.00	2.00	.00	1.00	6.00	6.00	.00	3.00	1.00
Low YSQ-S T-Score Group (40.1-49.65)	N	40	38	40	40	40	40	40	40	38	40	40	40	40	40	40	40	40	40
	Sum	99.0	38	85	8.00	25	58	79	34	9.00	6.00	34	.00	12	27	24	10	15	3.00
Medium YSQ-S T-score Group (50-70)	N	140	111	140	140	140	140	140	140	111	140	140	140	140	140	140	140	140	140
	Sum	272	122	323	52	129	170	244	66	25	94	49	31	71	105	68	71	72	8.00
Highest YSQ-S T-Score Group (70+)	N	53	43	53	53	53	53	53	53	43	53	53	53	53	53	53	53	53	53
	Sum	172	109	160	65	68	75	104	27	24	63	24	25	24	33	44	26	20	26
Total	N	244	202	244	244	244	244	244	244	202	244	244	244	244	244	244	244	244	244
	Sum	555	271	576	130	238	312	436	128	65	165	109	56	108	171	142	107	110	38

A 7.8 *Results for Study 1 Part 4: Discriminant Function Analysis for Table 3.7*

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.132(a)	97.6	97.6	.341
2	.003(a)	2.4	100.0	.057

a First 2 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.881	26.145	4	.000
2	.997	.666	1	.415

Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
EM father Object Relations Perception of Environment	-.546	.843
Early Memory 2 Domain 1 Disconnection & Rejection/5	.791	.618

Functions at Group Centroids

YSQ Domain Groups Low Medium High	Function	
	1	2
1.00	-.366	-.053
2.00	-.116	.080
3.00	.487	-.023

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		YSQ Domain Groups Low Medium High	Predicted Group Membership			Total
			1.00	2.00	3.00	
Original	Count	1.00	44	9	19	72
		2.00	30	14	23	67
		3.00	20	6	44	70
	%	1.00	61.1	12.5	26.4	100.0
		2.00	44.8	20.9	34.3	100.0
		3.00	28.6	8.6	62.9	100.0
Cross-validated(a)	Count	1.00	44	9	19	72
		2.00	35	9	23	67
		3.00	25	6	39	70
	%	1.00	61.1	12.5	26.4	100.0
		2.00	52.2	13.4	34.3	100.0
		3.00	35.7	8.6	55.7	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 48.8% of original grouped cases correctly classified.
c 44.0% of cross-validated grouped cases correctly classified.

A 7.9 *Results for Study 1 Part 4 Discriminant Function Analysis for Table 3.8*

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.148(a)	97.4	97.4	.360
2	.004(a)	2.6	100.0	.063

a First 2 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.867	29.198	6	.000
2	.996	.819	2	.664

Standardized Canonical Discriminant Function Coefficients

	Function 1	Function 2
EM1 Mistrust/Abuse	.399	.003
EM2 Social isolation/Alienation	.689	.629
EM father Object Relations Perception of Environment	-.545	.773

Functions at Group Centroids

YSQ Domain Groups Low Medium High	Function 1	Function 2
1.00	-.395	-.057
2.00	-.112	.090
3.00	.514	-.027

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		YSQ Domain Groups Low Medium High	Predicted Group Membership 1.00	2.00	3.00	Total
Original	Count	1.00	59	4	9	72
		2.00	44	2	21	67
		3.00	30	3	37	70
	%	1.00	81.9	5.6	12.5	100.0
		2.00	65.7	3.0	31.3	100.0
		3.00	42.9	4.3	52.9	100.0
Cross-validated(a)	Count	1.00	59	4	9	72
		2.00	44	2	21	67
		3.00	30	4	36	70
	%	1.00	81.9	5.6	12.5	100.0
		2.00	65.7	3.0	31.3	100.0
		3.00	42.9	5.7	51.4	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 46.9% of original grouped cases correctly classified.
c 46.4% of cross-validated grouped cases correctly classified.

A 7.10 *Results for Study 1 Part 4: Discriminant Function Analysis for Table 3.9*

First Analysis:

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.405(a)	100.0	100.0	.537

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.712	26.180	4	.000

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Mistrust/Abuse	.590
EM2 Social isolation/Alienation	.525
EM2 Subjugation	.480
EM mother Emotional Deprivation	.551

Functions at Group Centroids

YSQ T 3 Groups	Function 1
Low YSQ T-Score <41	-.621
High YSQ T-Score>59	.636

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

			Predicted Group Membership		
		YSQ T 3 Groups	Low YSQ T-Score <41	High YSQ T-Score>59	Total
Original	Count	Low YSQ T-Score <41	35	6	41
		High YSQ T-Score>59	12	28	40
		Ungrouped cases	106	62	168
	%	Low YSQ T-Score <41	85.4	14.6	100.0
		High YSQ T-Score>59	30.0	70.0	100.0
		Ungrouped cases	63.1	36.9	100.0
Cross-validated(a)	Count	Low YSQ T-Score <41	35	6	41
		High YSQ T-Score>59	12	28	40
	%	Low YSQ T-Score <41	85.4	14.6	100.0
		High YSQ T-Score>59	30.0	70.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 77.8% of original grouped cases correctly classified. c 77.8% of cross-validated grouped cases correctly classified.

Second Analysis:

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.089(a)	100.0	100.0	.286

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.918	6.685	1	.010

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM2 Object Relations Perception of Environment	1.000

Functions at Group Centroids

YSQ T 3 Groups	Function 1
Low YSQ T-Score <41	.291
High YSQ T-Score>59	-.298

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		YSQ T 3 Groups	Predicted Group Membership Low YSQ T-Score <41	High YSQ T-Score>59	Total
Original	Count	Low YSQ T-Score <41	21	20	41
		High YSQ T-Score>59	12	28	40
		Ungrouped cases	61	107	168
	%	Low YSQ T-Score <41	51.2	48.8	100.0
		High YSQ T-Score>59	30.0	70.0	100.0
		Ungrouped cases	36.3	63.7	100.0
Cross-validated(a)	Count	Low YSQ T-Score <41	21	20	41
		High YSQ T-Score>59	12	28	40
	%	Low YSQ T-Score <41	51.2	48.8	100.0
		High YSQ T-Score>59	30.0	70.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 60.5% of original grouped cases correctly classified.
c 60.5% of cross-validated grouped cases correctly classified

APPENDIX B FOR STUDY 2

B.1 Study 2 Information page for participants in Study 2

SWINBURNE UNIVERSITY OF TECHNOLOGY SCHOOL OF SOCIAL AND
BEHAVIOURAL SCIENCES

Project Title: An Investigation of Psychological Symptoms and Early Memories.

INVESTIGATORS: Steve Theiler (Coordinator of First Year Psychology at Swinburne
University of Technology (Lilydale). Senior and Associated Investigator: Dr. Glen Bates
(Acting Head of Psychology at Swinburne University of Technology (Hawthorn).

This project is to examine psychological symptoms and early childhood memories. As a
participant you will be required to write down four memories of a specific happening that
occurs to you, followed by your evaluation of the memory. You will also be required to fill out
feelings associated with your early memories and a measure of psychological symptoms. The
information from this study may help in understanding psychological symptoms.
Your initial agreement to participate does not stop you from discontinuing at any time. Results
from this study may, upon completion, appear in psychological publications but only as group
data. Individual responses may be used to illustrate theoretical points but no names will be
associated with this data.
Please be assured that all your responses will be anonymous and that your participation is
voluntary. To ensure anonymity your data will be analysed by a member of staff or post-
graduate student from the other campus. You are free to withdraw at any time. It is anticipated
that this questionnaire will take 30-45 minutes to complete. When you have completed the
questionnaire please place it in the envelope provided.

**If this questionnaire raises any issues for you please do not hesitate to contact your tutor (or the
coordinator of this subject). Alternatively, you may contact student-counselling services at the
Hawthorn Campus- Telephone: 92148025 OR
Lilydale Campus- Telephone: 92157101.**

> Any questions regarding the project titled : 'Early Childhood Memories and their
> Association with Psychological Symptoms' can be directed to the Senior Investigator
> Steve Theiler of the Department/School of Psychology on telephone number
> 92157125.

In the event that you have any complaint about the way you have been treated during the
study, or a query that the Senior Investigator has been unable to satisfy. Please contact

> The Chair
> Human Experimentation Ethics Committee
> Swinburne University of Technology
> P O Box 218
> HAWTHORN. VIC. 3122

(It is important to not spend too much time on any one question and remember there are no
right or wrong answers to any question in the questionnaire.)

B.2 Study 2 *Early Childhood Memory Instructions, Affect Terms, and Rating Scales*

FIRST EARLY MEMORY

Think back to the earliest memory you have of a specific happening or event from your childhood. Choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened.　　　"I remember one time_____

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Please answer the following questions about the memory.
What is the clearest part of the memory?
_____
What is the strongest feeling in the memory? What thought or action is this connected with?
_____
If you could change the memory in any way, what would that be?
_____
Your approximate age at the time of this memory _____years.

Please rate EACH adjectives below in relation to your memory above where:

　　　　　　　0 = NOT AT ALL
　　　　　　　1 = A LITTLE BIT
　　　　　　　2 = MODERATELY
　　　　　　　3 = QUITE A BIT
　　　　　　　4 = EXTREMELY

1.Joy ___ 2.Powerlessness___ 3.Self-Esteem___ 4.Anxiety___ 5.Satisfaction___
6.Strength___7.Shame___ 8.Enjoyment___ 9.Care___ 10.Love___ 11.Self-Alienation___
12.Tenderness___13.Guilt___ 14.Self-confidence___ 15.Loneliness___16.Trust___
17.Inferiority__ 18.Intimacy__19.Safety___ 20.Anger___ 21.Pride___ 22.Energy___ 23.Inner calm___ 24.Freedom___25.Clearness of the memory___ 26. Importance of memory___
27.Pleasantness of memory___

SECOND EARLY MEMORY

What is the next early memory that comes to mind? This may be chronologically the next early memory or another early memory that comes to mind. Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened.

"I remember one

time_____

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Please answer the following questions about the memory.

What is the clearest part of the memory?

_____

What is the strongest feeling in the memory? What thought or action is this connected with?

_____

If you could change the memory in any way, what would that be?

_____

Your approximate age at the time of this memory _____years.

Please rate EACH adjectives below in relation to your memory above where:

                         0 = NOT AT ALL
                         1 = A LITTLE BIT
                         2 = MODERATELY
                         3 = QUITE A BIT
                         4 = EXTREMELY

1.Joy ___ 2.Powerlessness___ 3.Self-Esteem___ 4.Anxiety___ 5.Satisfaction___ 6.Strength___ 7.Shame___ 8.Enjoyment___ 9.Care___ 10.Love___ 11.Self-Alienation___ 12.Tenderness___13.Guilt___ 14.Self-confidence___ 15.Loneliness___16.Trust___ 17.Inferiority__ 18.Intimacy__19.Safety___ 20.Anger___ 21.Pride___ 22.Energy___ 23.Inner calm___ 24.Freedom___ 25.Clearness of memory___ 26. Importance of memory___ 27.Pleasantness of memory___

FIRST MEMORY OF YOUR MOTHER

What is the early memory that comes to mind in relation to your mother. Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened. "I remember one time_____

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Please answer the following questions about the memory.
What is the clearest part of the memory?
_____
What is the strongest feeling in the memory? What thought or action is this connected with?
_____
If you could change the memory in any way, what would that be?
_____
Your approximate age at the time of this memory _____years.

Please rate EACH adjectives below in relation to <u>your memory above</u> where:
                    0 = NOT AT ALL
                    1 = A LITTLE BIT
                    2 = MODERATELY
                    3 = QUITE A BIT
                    4 = EXTREMELY

1.Joy ____ 2.Powerlessness____ 3.Self-Esteem____ 4.Anxiety____ 5.Satisfaction____
6.Strength____7.Shame____ 8.Enjoyment____ 9.Care____ 10.Love____ 11.Self-Alienation____
12.Tenderness____13.Guilt____ 14.Self-confidence____ 15.Loneliness____16.Trust____
17.Inferiority__ 18.Intimacy__19.Safety____ 20.Anger____ 21.Pride____ 22.Energy____ 23.Inner calm____ 24.Freedom____ 25.Clearness of the memory____ 26. Importance of the memory____
27.Pleasantness of the memory__

FIRST MEMORY OF YOUR FATHER

What is the early memory that comes to mind in relation to your father? Again, choose an event that you actually remember - (**leave out instances that someone told you about, that you yourself don't actually recall**). Also, be sure that it is a specific one-time event ("I remember one time…"), and not a recurring event ("I always used to…"). Please describe it in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened. "I remember one time_____

_____
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Please answer the following questions about the memory.
What is the clearest part of the memory?
_____
What is the strongest feeling in the memory? What thought or action is this connected with?
_____
If you could change the memory in any way, what would that be?
_____
Your approximate age at the time of this memory _____years.

Please rate EACH adjectives below in relation to <u>your memory above</u> where:
$$0 = \text{NOT AT ALL}$$
$$1 = \text{A LITTLE BIT}$$
$$2 = \text{MODERATELY}$$
$$3 = \text{QUITE A BIT}$$
$$4 = \text{EXTREMELY}$$

1.Joy ___ 2.Powerlessness___ 3.Self-Esteem___ 4.Anxiety___ 5.Satisfaction___
6.Strength___7.Shame___ 8.Enjoyment___ 9.Care___ 10.Love___ 11.Self-Alienation___
12.Tenderness___13.Guilt___ 14.Self-confidence___ 15.Loneliness___16.Trust___
17.Inferiority__ 18.Intimacy__19.Safety___ 20.Anger___ 21.Pride___ 22.Energy___ 23.Inner calm___ 24.Freedom___ 25.Clearness of the memory___ 26. Importance of the memory___
27.Pleasantness of the memory___

B.3   *Brief Symptom Inventory (BSI; Derogatis, 1993)*

On this page is a list of problems that people sometimes have. Please read each one carefully and circle the number that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST SEVEN DAYS INCLUDING TODAY. Circle only one number for each problem and do not skip any items. If you change your mind erase your first mark carefully.

0 = NOT AT ALL
1 = A LITTLE BIT
2 = MODERATELY
3 = QUITE A BIT
4 = EXTREMELY

HOW MUCH WERE YOU DISTRESSED BY:

1.	0	1	2	3	4	Nervousness or shakiness inside.
2.	0	1	2	3	4	Faintness or dizziness.
3.	0	1	2	3	4	The idea that someone else can control your thoughts.
4.	0	1	2	3	4	Feeling that others are to blame for most of your troubles.
5.	0	1	2	3	4	Trouble remembering things.
6.	0	1	2	3	4	Feeling easily annoyed or irritated.
7.	0	1	2	3	4	Pains in heart or chest.
8.	0	1	2	3	4	Feeling afraid in open spaces or on the streets.
9.	0	1	2	3	4	Thoughts of ending your life.
10	0	1	2	3	4	Feeling that most people cannot be trusted.
11.	0	1	2	3	4	Poor appetite.
12.	0	1	2	3	4	Suddenly scared for no reason.
13.	0	1	2	3	4	Temper outbursts you could not control.
14.	0	1	2	3	4	Feeling lonely even when you are with people.
15.	0	1	2	3	4	Feeling blocked in getting things done.

0 = NOT AT ALL
1 = A LITTLE BIT
2 = MODERATELY
3 = QUITE A BIT
4 = EXTREMELY

HOW MUCH WERE YOU DISTRESSED BY:

16.	0	1	2	3	4	Feeling lonely.
17.	0	1	2	3	4	Feeling blue.
18.	0	1	2	3	4	Feeling no interest in things.
19.	0	1	2	3	4	Feeling fearful.
20.	0	1	2	3	4	Your feelings being easily hurt.
21.	0	1	2	3	4	Feeling that people are unfriendly or dislike you.
22.	0	1	2	3	4	Feeling inferior to others.
23.	0	1	2	3	4	Nausea or upset stomach.
24.	0	1	2	3	4	Feeling that you are watched or talked about by others.
25.	0	1	2	3	4	Trouble falling asleep.
26.	0	1	2	3	4	Having to check and double check what you do.
27.	0	1	2	3	4	Difficulty making decisions.
28.	0	1	2	3	4	Feeling afraid to travel on buses, subways, or trains
29.	0	1	2	3	4	Trouble getting your breath.
30.	0	1	2	3	4	Hot or cold spells.
31.	0	1	2	3	4	Having to avoid certain things, places, or activities because they frighten you.
32.	0	1	2	3	4	Your mind going blank.
33.	0	1	2	3	4	Numbness or tingling in parts of your body.
34.	0	1	2	3	4	The idea that you should be punished for your sin

0 = NOT AT ALL
1 = A LITTLE BIT
2 = MODERAYELY
3 = QUITE A BIT
4 = EXTREMELY

HOW MUCH WERE YOU DISTRESSED BY:

35.	0	1	2	3	4	Feeling hopeless about the future.
36.	0	1	2	3	4	Trouble concentrating.
37.	0	1	2	3	4	Feeling weak in parts of your body.
38.	0	1	2	3	4	Feeling tense or keyed up.
39.	0	1	2	3	4	Thoughts of death or dying.
40.	0	1	2	3	4	Having urges to beat, injure, or harm someone.
41.	0	1	2	3	4	Having urges to break or smash things.
42.	0	1	2	3	4	Feeling very self-conscious with others.
43.	0	1	2	3	4	Feeling uneasy in crowds, such as shopping or at a movie.
44.	0	1	2	3	4	Never feeling close to another person.
45.	0	1	2	3	4	Spells of terror or panic.
46.	0	1	2	3	4	Getting into frequent arguments.
47.	0	1	2	3	4	Feeling nervous when you are left alone.
48.	0	1	2	3	4	Others not giving you proper credit for your achievements.
49.	0	1	2	3	4	Feeling so restless you couldn't sit still.
50.	0	1	2	3	4	Feelings of worthlessness.
51.	0	1	2	3	4	Feeling that people will take advantage of you if you let them.
52.	0	1	2	3	4	Feelings of guilt.
53.	0	1	2	3	4	The idea that something is wrong with your mind.

Please tick whether you are   male   ☐   or You are female   ☐
Your current Age in years _____

Thankyou for participating in this study

B4 *Frequencies for Study Two*

Table B1
Frequency in Percentages of Type of Memory for each Early Memory

Memory	Neutral Memory	Negative Memory	Positive Memory
Early Memory 1			
Males (n = 63)	9%	43%	48%
Females (n = 191)	9%	58%	33%
Early Memory 2			
Males (n = 60)	17%	42%	42%
Females (n = 187)	8%	57%	35%
Early Memory Mother			
Males (n = 57)	9%	54%	37%
Females (n = 184)	10%	40%	50%
Early Memory Father			
Males (n = 53)	9%	38%	53%
Females (n = 179)	11%	28%	61%

N = 278

Table B2
Frequencies in Percentages of Schemas in Early Memory 1 for Males and Females

Schemas	Males % (n = 67)	Females % (n = 211)
Emotional Deprivation	13%	20%
Abandonment	3%	16%
Mistrust Abuse	13%	16%
Social Isolation / Alienation	-	8%
Defectiveness /Shame	15%	17%
Failure	3%	3%
Dependency /Incompetence	6%	11%
Vulnerability to Harm	15%	20%
Enmeshment / Undeveloped Self	2%	2%
Subjugation	3%	4%
Self-Sacrifice	3%	2%
Emotional Inhibition	1%	1%
Unrelenting Standards	-	2%
Entitlement	9%	6%
Insufficient Self-Control/Self-Discipline	7%	4%
Approval-Seeking / Recognition -Seeking	-	6%
Negativity / Pessimism	9%	5%
Punitiveness	3%	1%

N = 278

Table B3

Frequencies in Percentages of Self -Identified qualities in Early Memory 1 for Males and Females

	Males % (*n* = 66)	Females % (*n* = 209)
Positive Affect		
Joy	61%	50%
Satisfaction	61%	46%
Enjoyment	13%	16%
Trust	70%	54%
Safety	75%	60%
Energy	70%	66%
Inner Calm	44%	38%
Freedom	47%	40%
Negative Affect		
Powerlessness	58%	69%
Anxiety	64%	69%
Shame	27%	32%
Self-Alienation	28%	35%
Guilt	32%	31%
Loneliness	36%	44%
Inferiority	40%	42%
Anger	38%	48%
Self-Enhancement		
Self-Esteem	51%	55%
Strength	51%	47%
Self-Confidence	51%	49%
Pride	49%	37%
Desire for Contact with Others		
Care	67%	61%
Love	59%	61%
Tenderness	45%	51%
Intimacy	37%	33%

N = 265

Table B4

Frequencies in Percentages of Schemas in Early Memory 2 for Males and Females

Schemas	Males % (*n* = 67)	Females % (*n* = 211)
Emotional Deprivation	6%	16%
Abandonment	6%	14%
Mistrust Abuse	19%	17%
Social Isolation / Alienation	4%	7%
Defectiveness /Shame	16%	18%
Failure	4%	4%
Dependency /Incompetence	9%	8%
Vulnerability to Harm	13%	16%
Enmeshment / Undeveloped Self	-	3%
Subjugation	3%	3%
Self-Sacrifice	1%	5%
Emotional Inhibition	1%	2%
Unrelenting Standards	1%	2%
Entitlement	10%	9%
Insufficient Self-Control/Self-Discipline	4%	5%
Approval-Seeking / Recognition -Seeking	7%	3%
Negativity / Pessimism	4%	5%
Punitiveness	3%	1%

N = 278

Table B5

Frequencies in Percentages of Self -Identified qualities in Early Memory 2 for Males and

Females

	Males % (n = 66)	Females % (n = 209)
Positive Affect		
Joy	57%	51%
Satisfaction	56%	52%
Enjoyment	60%	54%
Trust	47%	53%
Safety	52%	59%
Energy	68%	58%
Inner Calm	32%	35%
Freedom	46%	41%
Negative Affect		
Powerlessness	56%	63%
Anxiety	65%	65%
Shame	35%	35%
Self-Alienation	29%	28%
Guilt	31%	35%
Loneliness	40%	32%
Inferiority	40%	37%
Anger	40%	49%
Self-Enhancement		
Self-Esteem	56%	61%
Strength	44%	48%
Self-Confidence	60%	52%
Pride	48%	42%
Desire for Contact with Others		
Care	45%	60%
Love	51%	59%
Tenderness	31%	46%
Intimacy	18%	31%

N = 265

Table B6

Frequencies in Percentages of Schemas in Early Memory of Mother for Males and

Females

Schemas	Males % (n = 67)	Females % (n = 211)
Emotional Deprivation	13%	14%
Abandonment	10%	16%
Mistrust Abuse	10%	12%
Social Isolation / Alienation	1%	1%
Defectiveness /Shame	10%	11%
Failure	3%	-
Dependency /Incompetence	10%	8%
Vulnerability to Harm	18%	14%
Enmeshment / Undeveloped Self	4%	8%
Subjugation	-	2%
Self-Sacrifice	-	3%
Emotional Inhibition	-	1%
Unrelenting Standards	-	-
Entitlement	4%	7%
Insufficient Self-Control/Self-Discipline	7%	5%
Approval-Seeking / Recognition -Seeking	3%	2%
Negativity / Pessimism	6%	2%
Punitiveness	-	1%

N = 278

Table B7

Frequencies in Percentages of Self -Identified qualities in Early Memory of Mother for

Males and Females

	Males % (*n* = 66)	Females % (*n* = 209)
Positive Affect		
Joy	51%	59%
Satisfaction	47%	54%
Enjoyment	47%	58%
Trust	49%	66%
Safety	62%	69%
Energy	44%	50%
Inner Calm	28%	42%
Freedom	29%	41%
Negative Affect		
Powerlessness	59%	54%
Anxiety	68%	55%
Shame	36%	22%
Self-Alienation	18%	22%
Guilt	36%	20%
Loneliness	41%	30%
Inferiority	24%	25%
Anger	34%	31%
Self-Enhancement		
Self-Esteem	46%	56%
Strength	34%	43%
Self-Confidence	36%	52%
Pride	28%	41%
Desire for Contact with Others		
Care	63%	73%
Love	75%	77%
Tenderness	54%	63%
Intimacy	34%	46%

N = 265

Table B8

Frequencies in Percentages of Schemas in Early Memory of Father for Males and

Females

Schemas	Males % (n = 67)	Females % (n = 211)
Emotional Deprivation	9%	11%
Abandonment	6%	10%
Mistrust Abuse	9%	11%
Social Isolation / Alienation	1%	1%
Defectiveness /Shame	12%	6%
Failure	3%	1%
Dependency /Incompetence	1%	4%
Vulnerability to Harm	12%	13%
Enmeshment / Undeveloped Self	1%	1%
Subjugation	1%	1%
Self-Sacrifice	6%	4%
Emotional Inhibition	3%	1%
Unrelenting Standards	1%	-
Entitlement	3%	7%
Insufficient Self-Control/Self-Discipline	3%	2%
Approval-Seeking / Recognition -Seeking	3%	3%
Negativity / Pessimism	4%	3%
Punitiveness	1%	1%

N = 278

Table B9

Frequencies in Percentages of Self -Identified qualities in Early Memory of Father for

Males and Females

	Males % (*n* = 66)	Females % (*n* = 209)
Positive Affect		
Joy	67%	73%
Satisfaction	60%	72%
Enjoyment	61%	71%
Trust	62%	72%
Safety	61%	69%
Energy	58%	62%
Inner Calm	31%	52%
Freedom	45%	51%
Negative Affect		
Powerlessness	55%	42%
Anxiety	55%	44%
Shame	38%	16%
Self-Alienation	28%	14%
Guilt	30%	18%
Loneliness	36%	20%
Inferiority	30%	23%
Anger	23%	24%
Self-Enhancement		
Self-Esteem	61%	65%
Strength	48%	55%
Self-Confidence	65%	62%
Pride	47%	56%
Desire for Contact with Others		
Care	64%	72%
Love	76%	79%
Tenderness	42%	60%
Intimacy	38%	51%

N = 265

Appendix B Results for Study 2

B5 Part 1: *MANOVA Statistics for Counterbalancing; Gender differences on Young's Schemas and Object Relations Represented in the Early Childhood Memories*

MANOVA on Counterbalanced Measures of BSI and Early Childhood Memory Total Scores

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Counterbalance	Pillai's Trace	.005	.662(a)	2.000	241.000	.517	.005
	Wilks' Lambda	.995	.662(a)	2.000	241.000	.517	.005
	Hotelling's Trace	.005	.662(a)	2.000	241.000	.517	.005
	Roy's Largest Root	.005	.662(a)	2.000	241.000	.517	.005

N = 244

MANOVA on Gender and Young's Schemas in First Early Childhood Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.084	1.185(a)	18.000	234.000	.274	.084
	Wilks' Lambda	.916	1.185(a)	18.000	234.000	.274	.084
	Hotelling's Trace	.091	1.185(a)	18.000	234.000	.274	.084
	Roy's Largest Root	.091	1.185(a)	18.000	234.000	.274	.084

MANOVA on Gender and Young's Schemas in Second Early Childhood Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.052	.692(a)	18.000	227.000	.817	.052
	Wilks' Lambda	.948	.692(a)	18.000	227.000	.817	.052
	Hotelling's Trace	.055	.692(a)	18.000	227.000	.817	.052
	Roy's Largest Root	.055	.692(a)	18.000	227.000	.817	.052

MANOVA on Gender and Young's Schemas in Early Childhood Memory of Mother

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.093	1.344(a)	17.000	223.000	.167	.093
	Wilks' Lambda	.907	1.344(a)	17.000	223.000	.167	.093
	Hotelling's Trace	.102	1.344(a)	17.000	223.000	.167	.093
	Roy's Largest Root	.102	1.344(a)	17.000	223.000	.167	.093

MANOVA on Gender and Young's Schemas in Early Childhood Memory of Father

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.091	1.192(a)	18.000	213.000	.270	.091
	Wilks' Lambda	.909	1.192(a)	18.000	213.000	.270	.091
	Hotelling's Trace	.101	1.192(a)	18.000	213.000	.270	.091
	Roy's Largest Root	.101	1.192(a)	18.000	213.000	.270	.091

MANOVA on Gender and Object Relations Represented in First Early Childhood Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.020	1.016(a)	5.000	247.000	.409	.020
	Wilks' Lambda	.980	1.016(a)	5.000	247.000	.409	.020
	Hotelling's Trace	.021	1.016(a)	5.000	247.000	.409	.020
	Roy's Largest Root	.021	1.016(a)	5.000	247.000	.409	.020

MANOVA on Gender and Object Relations Represented in Second Early Childhood Memory

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.065	3.308(a)	5.000	239.000	.007	.065
	Wilks' Lambda	.935	3.308(a)	5.000	239.000	.007	.065
	Hotelling's Trace	.069	3.308(a)	5.000	239.000	.007	.065
	Roy's Largest Root	.069	3.308(a)	5.000	239.000	.007	.065

MANOVA on Gender and Object Relations Represented in Early Childhood Memory of Mother

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.094	4.818(a)	5.000	232.000	.000	.094
	Wilks' Lambda	.906	4.818(a)	5.000	232.000	.000	.094
	Hotelling's Trace	.104	4.818(a)	5.000	232.000	.000	.094
	Roy's Largest Root	.104	4.818(a)	5.000	232.000	.000	.094

MANOVA on Gender and Object Relations Represented in Early Childhood Memory of Father

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.037	1.708(a)	5.000	223.000	.134	.037
	Wilks' Lambda	.963	1.708(a)	5.000	223.000	.134	.037
	Hotelling's Trace	.038	1.708(a)	5.000	223.000	.134	.037
	Roy's Largest Root	.038	1.708(a)	5.000	223.000	.134	.037

B5 Part 2 Summary Statistics for Analysing Gender Differences on the BSI

Test for differences between Men and Women's BSI scores:

Descriptives
General Severity index

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	59	.7650	.49574	.06454	.6358	.8941	.08	2.51
Female	180	1.0693	.69099	.05150	.9677	1.1709	.00	2.98
Total	239	.9942	.66052	.04273	.9100	1.0783	.00	2.98

ANOVA
General Severity index

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.116	1	4.116	9.781	.002
Within Groups	99.721	237	.421		
Total	103.837	238			

Multivariate Tests of Subscales of BSI for differences between Men and Women(b)

Effect		Value	F	Hypothesis df	Error df	Sig.
Gender	Pillai's Trace	.110	2.817(a)	10.000	228.000	.003
	Wilks' Lambda	.890	2.817(a)	10.000	228.000	.003
	Hotelling's Trace	.124	2.817(a)	10.000	228.000	.003
	Roy's Largest Root	.124	2.817(a)	10.000	228.000	.003

Descriptive Statistics for BSI Subscales for Men and Women

	SEX	Mean	Std. Deviation	N
Somatisation	Male	.4600	.43352	59
	Female	.8389	.80076	180
	Total	.7454	.74488	239
Obsessive Compulsive	Male	1.1667	.75366	59
	Female	1.4324	.82982	180
	Total	1.3668	.81824	239
Interpersonal Sensitivity	Male	.9831	.71146	59
	Female	1.5583	1.14978	180
	Total	1.4163	1.08601	239
Depression	Male	.9972	.85573	59
	Female	1.2130	.97994	180
	Total	1.1597	.95362	239
Anxiety	Male	.7147	.61747	59
	Female	1.0667	.86137	180
	Total	.9798	.82102	239
Hostility	Male	.7525	.72430	59
	Female	1.1089	.80260	180
	Total	1.0209	.79752	239
Phobic anxiety	Male	.3186	.52669	59
	Female	.4756	.69061	180
	Total	.4368	.65644	239
Paranoid	Male	.7695	.68764	59
	Female	1.0667	.89243	180
	Total	.9933	.85482	239
Psychoticism	Male	.7390	.70687	59
	Female	.9200	.84128	180
	Total	.8753	.81252	239

N = 239

Tests of Between-Subjects Effects For BSI subscales

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Sex differences	Somatisation	6.377	1	6.377	12.026	.001
	Obsessive Compulsive	3.138	1	3.138	4.761	.030
	Interpersonal Sensitivity	14.706	1	14.706	13.103	.000
	Depression	2.069	1	2.069	2.288	.132
	Anxiety	5.505	1	5.505	8.421	.004
	Hostility	5.643	1	5.643	9.176	.003
	Phobic anxiety	1.094	1	1.094	2.556	.111
	Paranoid	3.924	1	3.924	5.471	.020
	Psychoticism	1.456	1	1.456	2.217	.138

N = 239

B6 Reliability Analyses for BSI Subscales for Men and Women

Somatisation for Men:

```
              Scale         Scale       Corrected
              Mean         Variance       Item-         Squared        Alpha
Scale Items  if Item       if Item        Total        Multiple       if Item
             Deleted       Deleted     Correlation    Correlation     Deleted

BSIQ23        2.7463        6.9195        .2475          .1034          .5057
BSIQ29        3.0746        7.8277        .3211          .2014          .4881
BSIQ37        2.5522        6.4934        .3250          .1711          .4682
BSIQ2         2.7612        7.5179        .1497          .1207          .5465
BSIQ7         2.7910        7.1072        .2824          .1942          .4882
BSIQ33        2.8657        7.6029        .2898          .2201          .4901
BSIQ30        2.8209        7.1796        .3054          .1779          .4798

Alpha =   .5343          Standardized item alpha =   .5532
```

Somatisation for Women:

```
              Scale       Corrected
Scale Items   Mean         Variance       Item-         Squared        Alpha
             if Item       if Item        Total        Multiple       if Item
             Deleted       Deleted     Correlation    Correlation     Deleted

BSIQ23        4.5048       21.9928        .5433          .3322          .7888
BSIQ29        5.1095       23.7631        .5804          .3774          .7852
BSIQ37        4.3905       20.6506        .6489          .4625          .7682
BSIQ2         4.8381       22.9210        .5190          .3251          .7925
BSIQ7         4.9571       23.4001        .4878          .2890          .7976
BSIQ33        4.9762       22.8176        .5297          .3399          .7906
BSIQ30        4.9095       22.5516        .5500          .3664          .7871

Alpha =   .8121          Standardized item alpha =   .8138
```

Obsessive-Compulsive for Men:

Scale	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ15	5.5909	15.1070	.5316	.3674	.7710
BSIQ26	5.9091	15.3455	.5479	.3893	.7670
BSIQ27	5.8939	14.3424	.6261	.4373	.7477
BSIQ32	6.3333	16.3487	.4860	.4121	.7806
BSIQ5	5.6212	14.7928	.6099	.4714	.7524
BSIQ36	5.5758	15.1096	.5109	.3632	.7764

Alpha = .7973   Standardized item alpha = .7975

Obsessive-Compulsive for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ15	6.8009	19.0364	.4802	.2746	.7832
BSIQ26	7.1469	17.6497	.5817	.3543	.7598
BSIQ27	6.9431	18.3301	.5186	.2955	.7751
BSIQ32	7.3128	18.2826	.5667	.4031	.7634
BSIQ5	7.0332	19.0894	.5475	.3410	.7686
BSIQ36	6.4929	17.7178	.6237	.4072	.7498

Alpha = .7979   Standardized item alpha = .7986

Interpersonal-Sensitivity for Men:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ20	3.0597	5.6024	.3048	.1367	.6561
BSIQ22	3.1493	4.6441	.4963	.3019	.5310
BSIQ42	2.5522	4.7662	.3924	.1824	.6075
BSIQ21	3.0597	4.4812	.5289	.3131	.5058

Alpha = .6479   Standardized item alpha = .6464

Interpersonal-Sensitivity for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ20	4.2727	14.1128	.5516	.3823	.7350
BSIQ22	4.7847	12.5063	.7209	.5205	.6517
BSIQ42	4.4833	13.8952	.6057	.4268	.7127
BSIQ21	4.5742	10.7553	.5207	.3467	.7888

Alpha = .7741   Standardized item alpha = .7968

Depression for Men:

Scale items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ16	4.6667	18.0718	.6897	.6394	.8147
BSIQ17	4.8636	18.0273	.7278	.6866	.8076
BSIQ35	4.7121	17.7466	.6445	.5131	.8248
BSIQ50	5.1364	19.1965	.6253	.5343	.8274
BSIQ18	4.8788	18.0774	.6601	.5382	.8207
BSIQ9	5.5909	21.5070	.4651	.3282	.8535

Alpha =   .8504   Standardized item alpha =   .8491

Depression for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ16	5.5143	21.8682	.7964	.6730	.8455
BSIQ17	5.3905	23.1195	.7563	.6330	.8527
BSIQ35	5.8667	24.2788	.6702	.4864	.8675
BSIQ50	6.1143	23.4414	.7271	.5754	.8578
BSIQ18	5.8952	23.9028	.7131	.5373	.8602
BSIQ9	6.8381	29.4761	.5506	.3244	.8884

Alpha =   .8834   Standardized item alpha =   .8848

Anxiety for Men:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ1	2.8333	8.6026	.4516	.2994	.6276
BSIQ12	3.9091	9.8070	.5860	.4618	.5956
BSIQ19	3.7576	9.3865	.4933	.3772	.6110
BSIQ38	3.1212	8.8774	.3932	.1791	.6535
BSIQ49	3.5152	11.3921	.1447	.1348	.7211
BSIQ45	4.0758	10.5942	.5872	.4081	.6161

Alpha =   .6805   Standardized item alpha =   .7185

Anxiety for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ1	4.8238	18.4234	.6339	.4637	.7860
BSIQ12	5.5857	18.9998	.6970	.5529	.7740
BSIQ19	5.2571	17.8761	.7222	.5611	.7654
BSIQ38	4.5905	18.6066	.6146	.4190	.7904
BSIQ49	5.3619	22.5000	.3076	.1194	.8491
BSIQ45	5.7381	20.4048	.5949	.4380	.7960

Alpha =   .8236   Standardized item alpha =   .8230

Hostility for Men:

Scale Itmes	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ6	2.2537	8.3134	.5920	.3862	.7353
BSIQ13	3.3433	10.4410	.4288	.2209	.7831
BSIQ46	3.2090	9.7133	.5507	.3119	.7502
BSIQ41	3.1194	7.9249	.7058	.5245	.6916
BSIQ40	3.1791	8.7553	.5475	.4032	.7502

Alpha =   .7848   Standardized item alpha =   .7835

Hostility for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ6	3.3029	10.3474	.5374	.3785	.7241
BSIQ13	4.1394	9.8114	.5977	.4066	.7007
BSIQ46	4.2692	10.3040	.5949	.3790	.7015
BSIQ41	4.7115	11.0468	.5468	.4922	.7197
BSIQ40	4.9808	13.0045	.4196	.4057	.7609

Alpha =   .7659   Standardized item alpha =   .7664

Phobic Anxiety for Men:

Scale Items	Mean if Item Deleted	Variance if Item Deleted	Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ31	1.3333	4.8103	.6782	.4745	.6755
BSIQ43	1.1667	5.7410	.3458	.2366	.8161
BSIQ47	1.5909	6.6762	.4513	.3993	.7597
BSIQ28	1.6061	5.9655	.6614	.5347	.7028
BSIQ8	1.3939	5.1040	.7003	.5358	.6702

Alpha =   .7705   Standardized item alpha =   .7915

Phobic Anxiety for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ31	1.7915	7.7754	.5302	.2890	.7215
BSIQ43	1.8199	8.0436	.5062	.2617	.7296
BSIQ47	1.7536	7.7485	.5101	.2734	.7300
BSIQ28	2.0142	8.1950	.6021	.4450	.7000
BSIQ8	1.9668	8.4132	.5310	.3947	.7217

Alpha =   .7631   Standardized item alpha =   .7681

Paranoid for Men:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ48	2.8209	7.5432	.4668	.2938	.6603
BSIQ51	2.9403	6.9964	.6159	.4162	.5885
BSIQ4	3.2090	9.3193	.3286	.1155	.7072
BSIQ10	3.0299	7.4536	.6214	.4160	.5930
BSIQ24	2.8657	9.1483	.3068	.1630	.7171

Alpha = .7073   Standardized item alpha = .7017

Paranoid for Women:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ48	4.2415	13.8249	.5628	.3308	.7318
BSIQ51	3.9565	12.3525	.6490	.4300	.6996
BSIQ4	4.4928	15.2997	.4567	.2162	.7648
BSIQ10	4.2802	13.3968	.5694	.3351	.7293
BSIQ24	4.2271	13.9628	.5166	.2704	.7473

Alpha = .7771   Standardized item alpha = .7752

Psychoticism for Men:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ3	3.3182	10.2818	.2652	.0859	.6755
BSIQ14	2.4848	7.4228	.4827	.3168	.5884
BSIQ34	3.2273	9.0399	.4227	.2731	.6206
BSIQ44	2.6818	8.1280	.3424	.1259	.6640
BSIQ53	2.8333	7.0949	.6378	.4681	.5075

Alpha = .6688   Standardized item alpha = .6684

Psychoticism for Women:

Scale Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BSIQ3	3.9194	14.1601	.3146	.1142	.7337
BSIQ14	2.8863	10.5965	.5704	.3622	.6391
BSIQ34	4.1043	14.3796	.4231	.1997	.7040
BSIQ44	3.6256	11.6830	.5169	.2908	.6626
BSIQ53	3.4171	10.1871	.6203	.4055	.6146

Alpha = .7235   Standardized item alpha = .7199

B7 Results for Table 4.4   *Total of Young's Maladaptive Schema scores for all four memories for the Low GSI T-Score Group compared with the High GSI T-Score Group*

Early Memory Total Schemas for all four memories summed

GSI Groups Low High		ED	MA	AB	SI	DS	FA	DI	VH	EM	SJ	SS	EI	US	ET	AS	IS	NS	PU
Low GSI T-Score < 41	N	37	35	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
	Sum	75.00	52.00	40.00	13.00	67.00	13.00	31.00	94.00	6.00	5.00	8.00	5.00	5.00	25.00	10.00	14.00	28.00	4.00
High GSI T-Score > 60	N	37	33	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
	Sum	98.00	73.00	68.00	29.00	90.00	12.00	38.00	80.00	9.00	11.00	15.00	6.00	.00	22.00	21.00	26.00	15.00	3.00

N = 245

B8 Results for Discriminant Functions Analyses for BSI (Derogatis, 1993)

B8.1 Results for Table 4.7: 1st DFA Equal Groups (Total Sample)

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.062(a)	100.0	100.0	.241

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.942	14.495	2	.001

Standardized Canonical Discriminant Function Coefficients

	Function 1
Total Em Domain 1 Disconnection & Rejection	1.000

Functions at Group Centroids

I GSI t-score 3 Equal groups	Function 1
low GSI T-Score Group	-.169
middle GSI T-Score Group	-.181
high GSI T-Score Group	.348

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		I GSI t-score 3 Equal groups	Predicted Group Membership			Total
			low GSI T-Score Group	middle GSI T-Score Group	high GSI T-Score Group	
Original	Count	low GSI T-Score Group	7	50	23	80
		middle GSI T-Score Group	11	50	22	83
		high GSI T-Score Group	11	34	37	82
		Ungrouped cases	2	7	9	18
	%	low GSI T-Score Group	8.8	62.5	28.8	100.0
		middle GSI T-Score Group	13.3	60.2	26.5	100.0
		high GSI T-Score Group	13.4	41.5	45.1	100.0
		Ungrouped cases	11.1	38.9	50.0	100.0

Classification Results(b,c)

			Predicted Group Membership			
		I GSI t-score 3 Equal groups	low GSI T-Score Group	middle GSI T-Score Group	high GSI T-Score Group	Total
Cross-validated(a)	Count	low GSI T-Score Group	7	50	23	80
		middle GSI T-Score Group	11	50	22	83
		high GSI T-Score Group	11	34	37	82
	%	low GSI T-Score Group	8.8	62.5	28.8	100.0
		middle GSI T-Score Group	13.3	60.2	26.5	100.0
		high GSI T-Score Group	13.4	41.5	45.1	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 38.4% of original grouped cases correctly classified.
c 38.4% of cross-validated grouped cases correctly classified.

B 8.2 Results for Table 4.7   1st DFA Equal Groups (Women)

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.051(a)	100.0	100.0	.220

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.952	8.787	2	.012

Standardized Canonical Discriminant Function Coefficients

	Function 1
Total Em Domain 1 Disconnection & Rejection	1.000

Functions at Group Centroids

I GSI t-score 3 Equal groups	Function 1
low GSI T-Score Group	-.123
middle GSI T-Score Group	-.224
high GSI T-Score Group	.270

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		I GSI t-score 3 Equal groups	Predicted Group Membership			Total
			low GSI T-Score Group	middle GSI T-Score Group	high GSI T-Score Group	
Original	Count	low GSI T-Score Group	2	28	17	47
		middle GSI T-Score Group	4	40	17	61
		high GSI T-Score Group	4	33	35	72
		Ungrouped cases	1	7	4	12
	%	low GSI T-Score Group	4.3	59.6	36.2	100.0
		middle GSI T-Score Group	6.6	65.6	27.9	100.0
		high GSI T-Score Group	5.6	45.8	48.6	100.0
		Ungrouped cases	8.3	58.3	33.3	100.0
Cross-validated(a)	Count	low GSI T-Score Group	2	28	17	47
		middle GSI T-Score Group	4	40	17	61
		high GSI T-Score Group	4	33	35	72
	%	low GSI T-Score Group	4.3	59.6	36.2	100.0
		middle GSI T-Score Group	6.6	65.6	27.9	100.0
		high GSI T-Score Group	5.6	45.8	48.6	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 42.8% of original grouped cases correctly classified.
c 42.8% of cross-validated grouped cases correctly classified.

B 8.3 Results for Table 4.7: *1ˢᵗ DFA T-Score Groups (Total Sample)*

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.091(a)	100.0	100.0	.289

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.917	21.076	2	.000

Standardized Canonical Discriminant Function Coefficients

	Function
	1
Em2 Domain 1 Disconnection/Rejection	1.000

Functions at Group Centroids

GSI T-Score Groups 1,2,3	Function 1
Low GST T-Score <43	-.140
Medium GSI T-Score 43-62	-.103
High GSI T-Score >63	.802

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		GSI T-Score Groups 1,2,3	Predicted Group Membership			Total
			Low GST T-Score <43	Medium GSI T-Score 43-62	High GSI T-Score >63	
Original	Count	Low GST T-Score <43	28	8	14	50
		Medium GSI T-Score 43-62	88	37	40	165
		High GSI T-Score >63	10	5	15	30
		Ungrouped cases	12	4	2	18
	%	Low GST T-Score <43	56.0	16.0	28.0	100.0
		Medium GSI T-Score 43-62	53.3	22.4	24.2	100.0
		High GSI T-Score >63	33.3	16.7	50.0	100.0
		Ungrouped cases	66.7	22.2	11.1	100.0
Cross-validated(a)	Count	Low GST T-Score <43	28	8	14	50
		Medium GSI T-Score 43-62	88	37	40	165
		High GSI T-Score >63	10	5	15	30
	%	Low GST T-Score <43	56.0	16.0	28.0	100.0
		Medium GSI T-Score 43-62	53.3	22.4	24.2	100.0
		High GSI T-Score >63	33.3	16.7	50.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 32.7% of original grouped cases correctly classified.
c 32.7% of cross-validated grouped cases correctly classified.

B 8.4 Results for Table 4.7: 1st DFA T-Score Groups (Women)

B 8.4 Results for Table 4.7: 1ˢᵗ DFA T-Score Groups (Women)

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.095(a)	100.0	100.0	.295

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.913	16.143	2	.000

Standardized Canonical Discriminant Function Coefficients Functions at Group Centroids

	Function 1
Em2 Domain 1 Disconnection/Rejection	1.000

GSI T-Score Groups 1,2,3	Function 1
Low GST T-Score <43	-.121
Medium GSI T-Score 43-62	-.134
High GSI T-Score >63	.714

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		GSI T-Score Groups 1,2,3	Predicted Group Membership			Total
			Low GST T-Score <43	Medium GSI T-Score 43-62	High GSI T-Score >63	
Original	Count	Low GST T-Score <43	2	21	11	34
		Medium GSI T-Score 43-62	14	72	32	118
		High GSI T-Score >63	2	11	15	28
		Ungrouped cases	1	10	1	12
	%	Low GST T-Score <43	5.9	61.8	32.4	100.0
		Medium GSI T-Score 43-62	11.9	61.0	27.1	100.0
		High GSI T-Score >63	7.1	39.3	53.6	100.0
		Ungrouped cases	8.3	83.3	8.3	100.0
Cross-validated(a)	Count	Low GST T-Score <43	2	21	11	34
		Medium GSI T-Score 43-62	14	72	32	118
		High GSI T-Score >63	2	11	15	28
	%	Low GST T-Score <43	5.9	61.8	32.4	100.0
		Medium GSI T-Score 43-62	11.9	61.0	27.1	100.0
		High GSI T-Score >63	7.1	39.3	53.6	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 49.4% of original grouped cases correctly classified.
c 49.4% of cross-validated grouped cases correctly classified.

B 8.5 DFA Results for Table 4.8: People in the Low and High GSI T-Score groups.

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.200(a)	100.0	100.0	.408

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.834	11.925	3	.008

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM Father Abandonment	.881
EM Mother Insufficient Self-Control/Self-Discipline	.761
EM Father Object Relations Perception of Environment	.764

Functions at Group Centroids

bsigrou3	Function 1
Low BSI T-Score <40.93	-.447
High BSI T-Score > 60	.434

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		bsigrou3	Low BSI T-Score <40.93	High BSI T-Score > 60	Total
Original	Count	Low BSI T-Score <40.93	16	18	34
		High BSI T-Score > 60	6	29	35
		Ungrouped cases	50	113	163
	%	Low BSI T-Score <40.93	47.1	52.9	100.0
		High BSI T-Score > 60	17.1	82.9	100.0
		Ungrouped cases	30.7	69.3	100.0
Cross-validated(a)	Count	Low BSI T-Score <40.93	16	18	34
		High BSI T-Score > 60	6	29	35
	%	Low BSI T-Score <40.93	47.1	52.9	100.0
		High BSI T-Score > 60	17.1	82.9	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 65.2% of original grouped cases correctly classified.
c 65.2% of cross-validated grouped cases correctly classified.

B 8.6 DFA Results for Table 4.8 for Women in the Low and High GSI T-Score groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.298(a)	100.0	100.0	.479

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.771	13.419	3	.004

Standardized Canonical Discriminant Function Coefficients

	Function
	1
EM Father Abandonment	.946
EM Mother Insufficient Self-Control/Self-Discipline	.825
EM Father Object Relations Perception of Environment	.659

Functions at Group Centroids

GSIGROU3	Function
	1
Low BSI T-Score <40.93	-.609
High BSI T-Score > 60	.471

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		GSIGROU3	Predicted Group Membership		Total
			Low BSI T-Score <40.93	High BSI T-Score > 60	
Original	Count	Low BSI T-Score <40.93	12	12	24
		High BSI T-Score > 60	5	26	31
		Ungrouped cases	33	88	121
	%	Low BSI T-Score <40.93	50.0	50.0	100.0
		High BSI T-Score > 60	16.1	83.9	100.0
		Ungrouped cases	27.3	72.7	100.0
Cross-validated(a)	Count	Low BSI T-Score <40.93	12	12	24
		High BSI T-Score > 60	5	26	31
	%	Low BSI T-Score <40.93	50.0	50.0	100.0
		High BSI T-Score > 60	16.1	83.9	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 69.1% of original grouped cases correctly classified.
c 69.1% of cross-validated grouped cases correctly classified.

B 9.1 DFA Results for Table 4.9 for People in the Low and High Somatisation T-Score groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.150(a)	100.0	100.0	.362

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.869	9.109	2	.011

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Negativity/Vulnerability to Error	-.689
EM1Negative Affect	.886

Functions at Group Centroids

Somatization Groups	Function 1
Low Somatization T-Score <43	-.360
High Somatization T-Score>59	.405

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Somatization Groups	Predicted Group Membership Low Somatization T-Score <43	Predicted Group Membership High Somatization T-Score>59	Total
Original	Count	Low Somatization T-Score <43	29	15	44
		High Somatization T-Score>59	11	25	36
		Ungrouped cases	127	62	189
	%	Low Somatization T-Score <43	65.9	34.1	100.0
		High Somatization T-Score>59	30.6	69.4	100.0
		Ungrouped cases	67.2	32.8	100.0
Cross-validated(a)	Count	Low Somatization T-Score <43	29	15	44
		High Somatization T-Score>59	11	25	36
	%	Low Somatization T-Score <43	65.9	34.1	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 67.5% of original grouped cases correctly classified.
c 67.5% of cross-validated grouped cases correctly classified.

B 9.2 DFA Results for Table 4.9: Women in the Low and High Somatisation T-Score groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.162(a)	100.0	100.0	.373

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.861	8.464	3	.037

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Object Relations Perception of Environment	.525
EM1 Negativity/Vulnerability to Error	.622
EM1Negative Affect	-.451

Functions at Group Centroids

Somatization Groups	Function 1
Low Somatization T-Score <43	.437
High Somatization T-Score>59	-.358

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Somatization Groups	Predicted Group Membership		Total
			Low Somatization T-Score <43	High Somatization T-Score>59	
Original	Count	Low Somatization T-Score <43	14	13	27
		High Somatization T-Score>59	6	27	33
		Ungrouped cases	62	58	120
	%	Low Somatization T-Score <43	51.9	48.1	100.0
		High Somatization T-Score>59	18.2	81.8	100.0
		Ungrouped cases	51.7	48.3	100.0
Cross-validated(a)	Count	Low Somatization T-Score <43	13	14	27
		High Somatization T-Score>59	6	27	33
	%	Low Somatization T-Score <43	48.1	51.9	100.0
		High Somatization T-Score>59	18.2	81.8	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 68.3% of original grouped cases correctly classified. c 66.7% of cross-validated grouped cases correctly classified.

B10.1 DFA *Results for Table 4.10: People in the Low and High Obsessive-Compulsive Symptoms Groups*

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.380(a)	100.0	100.0	.525

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.725	28.330	4	.000

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1Negative Affect	.683
EM2 Emotional Deprivation	.575
EM1 Object Relations Individual Distinctiveness	.481
EM1 Approval-Seeking/Recognition-Seeking	.381

Functions at Group Centroids

Obsessive Compulsive T-Score Groups	Function 1
Low Obsessive-Compulsive T-Score Group	-.623
High Obsessive-Compulsive T-Score Group	.596

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Obsessive Compulsive T-Score Groups	Predicted Group Membership — Low Obsessive-Compulsive T-Score Group	Predicted Group Membership — High Obsessive-Compulsive T-Score Group	Total
Original	Count	Low Obsessive-Compulsive T-Score Group	36	9	45
		High Obsessive-Compulsive T-Score Group	14	33	47
		Ungrouped cases	99	57	156
	%	Low Obsessive-Compulsive T-Score Group	80.0	20.0	100.0
		High Obsessive-Compulsive T-Score Group	29.8	70.2	100.0
		Ungrouped cases	63.5	36.5	100.0
Cross-validated(a	Count	Low Obsessive-Compulsive T-Score Group	35	10	45
		High Obsessive-Compulsive T-Score Group	14	33	47
	%	Low Obsessive-Compulsive T-Score Group	77.8	22.2	100.0
		High Obsessive-Compulsive T-Score Group	29.8	70.2	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 75.0% of original grouped cases correctly classified.
c 73.9% of cross-validated grouped cases correctly classified.

B 10.2 DFA Results for Table 4.10: Women in the Low and High Obsessive-Compulsive Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.197(a)	100.0	100.0	.406

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.835	12.703	3	.005

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Object Relations Perception of Environment	.687
EM1 Negativity/Vulnerability to Error	.657
EM1 Approval-Seeking/Recognition-Seeking	-.598

Functions at Group Centroids

Obsessive Compulsive T-Score Groups	Function 1
Low Obsessive-Compulsive T-Score Group	.516
High Obsessive-Compulsive T-Score Group	-.372

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Obsessive Compulsive T-Score Groups	Predicted Group Membership		Total
			Low Obsessive-Compulsive T-Score Group	High Obsessive-Compulsive T-Score Group	
Original	Count	Low Obsessive-Compulsive T-Score Group	16	15	31
		High Obsessive-Compulsive T-Score Group	8	35	43
		Ungrouped cases	42	75	117
	%	Low Obsessive-Compulsive T-Score Group	51.6	48.4	100.0
		High Obsessive-Compulsive T-Score Group	18.6	81.4	100.0
		Ungrouped cases	35.9	64.1	100.0
Cross-validated(a)	Count	Low Obsessive-Compulsive T-Score Group	16	15	31
		High Obsessive-Compulsive T-Score Group	8	35	43
	%	Low Obsessive-Compulsive T-Score Group	51.6	48.4	100.0
		High Obsessive-Compulsive T-Score Group	18.6	81.4	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 68.9% of original grouped cases correctly classified.
c 68.9% of cross-validated grouped cases correctly classified.

B 11.1 DFA Results for Table 4.11: People in the Low and High Interpersonal-Sensitivity Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.191(a)	100.0	100.0	.401

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.839	13.753	3	.003

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Object Relations Individual Distinctiveness	.762
EM Father Negative Affect	.546
EM1 Object Relations Perception of Environment	-.609

Functions at Group Centroids

Interperonal Sensitivity Groups	Function 1
Low Interpersonal Sensitivity T-Score<41	-.443
High Interpersonal Sensitivity T-Score>59	.422

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Interpersonal Sensitivity Groups	Predicted Group Membership – Low Interpersonal Sensitivity T-Score<41	Predicted Group Membership – High Interpersonal Sensitivity T-Score>59	Total
Original	Count	Low Interpersonal Sensitivity T-Score<41	28	12	40
		High Interpersonal Sensitivity T-Score>59	11	31	42
		Ungrouped cases	63	69	132
	%	Low Interpersonal Sensitivity T-Score<41	70.0	30.0	100.0
		High Interpersonal Sensitivity T-Score>59	26.2	73.8	100.0
		Ungrouped cases	47.7	52.3	100.0
Cross-validated(a)	Count	Low Interpersonal Sensitivity T-Score<41	28	12	40
		High Interpersonal Sensitivity T-Score>59	15	27	42
	%	Low Interpersonal Sensitivity T-Score<41	70.0	30.0	100.0
		High Interpersonal Sensitivity T-Score>59	35.7	64.3	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 72.0% of original grouped cases correctly classified.c 67.1% of cross-validated grouped cases correctly classified.

B 11.2 DFA Results for Table 4.11   Women in the Low and High Interpersonal-Sensitivity Symptoms Group

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.429(a)	100.0	100.0	.548

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.700	21.070	4	.000

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM Father Insufficient Self-Control/Self-Discipline	.521
EM Mother Positve Affect	.646
EM1 Insufficient Self-Control Self-Discipline	.604
EM1 Object Relations Perception of Environment	.765

Functions at Group Centroids

Interperonal Sensitivity Groups	Function 1
Low Interpersonal Sensitivity T-Score<41	.795
High Interpersonal Sensitivity T-Score>59	-.523

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Interperonal Sensitivity Groups	Predicted Group Membership Low Interpersonal Sensitivity T-Score<41	Predicted Group Membership High Interpersonal Sensitivity T-Score>59	Total
Original	Count	Low Interpersonal Sensitivity T-Score<41	14	15	29
		High Interpersonal Sensitivity T-Score>59	8	32	40
		Ungrouped cases	39	65	104
	%	Low Interpersonal Sensitivity T-Score<41	48.3	51.7	100.0
		High Interpersonal Sensitivity T-Score>59	20.0	80.0	100.0
		Ungrouped cases	37.5	62.5	100.0
Cross-validated(a)	Count	Low Interpersonal Sensitivity T-Score<41	12	17	29
		High Interpersonal Sensitivity T-Score>59	9	31	40
	%	Low Interpersonal Sensitivity T-Score<41	41.4	58.6	100.0
		High Interpersonal Sensitivity T-Score>59	22.5	77.5	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 66.7% of original grouped cases correctly classified.
c 62.3% of cross-validated grouped cases correctly classified.

B 12.1 DFA Results for Table 4.12   People in the Low and High Depression Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.153(a)	100.0	100.0	.365

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.867	13.902	3	.003

Standardized Canonical Discriminant Function Coefficients

	Function1
EM1 Mistrust/Abuse	.756
EM1 Negativity/Vulnerability to Error	.302
EM2 Abandonment	-.674

Functions at Group Centroid

Depression Groups	Function 1
Low Depression T-Score <41	.384
High Depresion T-Score > 59	-.391

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

			Predicted Group Membership		
		Depression Groups	Low Depression T-Score <41	High Depresion T-Score > 59	Total
Original	Count	Low Depression T-Score <41	17	34	51
		High Depresion T-Score > 59	5	45	50
		Ungrouped cases	32	153	185
	%	Low Depression T-Score <41	33.3	66.7	100.0
		High Depresion T-Score > 59	10.0	90.0	100.0
		Ungrouped cases	17.3	82.7	100.0
Cross-validated(a)	Count	Low Depression T-Score <41	17	34	51
		High Depresion T-Score > 59	5	45	50
	%	Low Depression T-Score <41	33.3	66.7	100.0
		High Depresion T-Score > 59	10.0	90.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 61.4% of original grouped cases correctly classified.
c 61.4% of cross-validated grouped cases correctly classified.

B 12.2 DFA Results for Table 4.12: Women in the Low and High Depression Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.162(a)	100.0	100.0	.373

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.861	9.291	2	.010

Standardized Canonical Discriminant Function Coefficients

	Function1
EM Father Abandonment	1.073
EM Father Object Relations Perception of Environment	.765

Functions at Group Centroids

Depression Groups	Function 1
Low Depression T-Score <41	-.441
High Depresion T-Score > 59	.355

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Depression Groups	Predicted Group Membership		Total
			Low Depression T-Score <41	High Depression T-Score > 59	
Original	Count	Low Depression T-Score <41	13	16	29
		High Depresion T-Score > 59	8	28	36
		Ungrouped cases	34	77	111
	%	Low Depression T-Score <41	44.8	55.2	100.0
		High Depression T-Score > 59	22.2	77.8	100.0
		Ungrouped cases	30.6	69.4	100.0
Cross-validated(a	Count	Low Depression T-Score <41	13	16	29
		High Depression T-Score > 59	8	28	36
	%	Low Depression T-Score <41	44.8	55.2	100.0
		High Depression T-Score > 59	22.2	77.8	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 63.1% of original grouped cases correctly classified.
c 63.1% of cross-validated grouped cases correctly classified.

B 13.1 Results for DFA in Table 4.13:People in the Low and High Anxiety Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.283(a)	100.0	100.0	.469

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.780	14.060	3	.003

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM2 Abandonment	-.532
EM2 Subjugation	.690
EM Father Object Relations Perception of Self	.694

Functions at Group Centroids

Anxiety T-Score Groups	Function1
Low Anxiety T-Score <41	.798
High Anxiety T-Score>60	-.342

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Anxiety T-Score Groups	Predicted Group Membership		Total
			Low Anxiety T-Score <41	High Anxiety T-Score>60	
Original	Count	Low Anxiety T-Score <41	10	8	18
		High Anxiety T-Score>60	8	34	42
		Ungrouped cases	72	100	172
	%	Low Anxiety T-Score <41	55.6	44.4	100.0
		High Anxiety T-Score>60	19.0	81.0	100.0
		Ungrouped cases	41.9	58.1	100.0
Cross-validated(a)	Count	Low Anxiety T-Score <41	10	8	18
		High Anxiety T-Score>60	8	34	42
	%	Low Anxiety T-Score <41	55.6	44.4	100.0
		High Anxiety T-Score>60	19.0	81.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 73.3% of original grouped cases correctly classified. c 73.3% of cross-validated grouped cases correctly classified.

B 13.2 Results for DFA in Table 4.13: Women in the Low and High Anxiety Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.257(a)	100.0	100.0	.452

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.795	11.339	3	.010

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM2 Abandonment	-.578
EM2 Subjugation	.725
EM Father Object Relations Perception of Self	.569

Functions at Group Centroids

Anxiety T-Score Groups	Function 1
Low Anxiety T-Score <41	.757
High Anxiety T-Score>60	-.327

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Anxiety T-Score Groups	Predicted Group Membership		Total
			Low Anxiety T-Score <41	High Anxiety T-Score>60	
Original	Count	Low Anxiety T-Score <41	2	14	16
		High Anxiety T-Score>60	0	37	37
		Ungrouped cases	5	118	123
	%	Low Anxiety T-Score <41	12.5	87.5	100.0
		High Anxiety T-Score>60	.0	100.0	100.0
		Ungrouped cases	4.1	95.9	100.0
Cross-validated(a)	Count	Low Anxiety T-Score <41	2	14	16
		High Anxiety T-Score>60	0	37	37
	%	Low Anxiety T-Score <41	12.5	87.5	100.0
		High Anxiety T-Score>60	.0	100.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 73.6% of original grouped cases correctly classified. c 73.6% of cross-validated grouped cases correctly classified.

B 14.1 Results of DFA for Table 4.14: People in the Low and High Hostility Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.303(a)	100.0	100.0	.482

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.767	22.239	4	.000

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM2Negative Affect	.706
EM1 Approval-Seeking/Recognition-Seeking	.463
EM Father Object Relations Perception of Self	-.380
EM1 Object Relations Individual Distinctiveness	.480

Functions at Group Centroids

Hostility Groups	Function 1
Low Hostility T-Score<42	-.474
High Hostility T-Score>59	.624

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Hostility Groups	Predicted Group Membership Low Hostility T-Score<42	Predicted Group Membership High Hostility T-Score>59	Total
Original	Count	Low Hostility T-Score<42	36	14	50
		High Hostility T-Score>59	13	25	38
		Ungrouped cases	78	55	133
	%	Low Hostility T-Score<42	72.0	28.0	100.0
		High Hostility T-Score>59	34.2	65.8	100.0
		Ungrouped cases	58.6	41.4	100.0
Cross-validated(a)	Count	Low Hostility T-Score<42	36	14	50
		High Hostility T-Score>59	13	25	38
	%	Low Hostility T-Score<42	72.0	28.0	100.0
		High Hostility T-Score>59	34.2	65.8	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 69.3% of original grouped cases correctly classified.
c 69.3% of cross-validated grouped cases correctly classified.

B 14.2 Results of DFA for Table 4.14: Women in the Low and High Hostility Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.330(a)	100.0	100.0	.498

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.752	17.125	4	.002

Standardized Canonical Discriminant Function Coefficients

	Function1
EM2Negative Affect	.640
EM1 Approval-Seeking/Recognition-Seeking	.495
EM1 Object Relations Individual Distinctiveness	.444
EM Father Object Relations Perception of Self	-.535

Functions at Group Centroids

Hostility Groups	Function1
Low Hostility T-Score<42	-.566
High Hostility T-Score>59	.566

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Hostility Groups	Predicted Group Membership		Total
			Low Hostility T-Score<42	High Hostility T-Score>59	
Original	Count	Low Hostility T-Score<42	24	8	32
		High Hostility T-Score>59	10	22	32
		Ungrouped cases	60	44	104
	%	Low Hostility T-Score<42	75.0	25.0	100.0
		High Hostility T-Score>59	31.3	68.8	100.0
		Ungrouped cases	57.7	42.3	100.0
Cross-validated(a)	Count	Low Hostility T-Score<42	23	9	32
		High Hostility T-Score>59	10	22	32
	%	Low Hostility T-Score<42	71.9	28.1	100.0
		High Hostility T-Score>59	31.3	68.8	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
b 71.9% of original grouped cases correctly classified.
c 70.3% of cross-validated grouped cases correctly classified.

B15.1 DFA Results of Table 4.15: People in the Low and High Phobic Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.078(a)	100.0	100.0	.269

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.927	9.793	2	.007

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Object Relations Perception of Environment	.784
EM Father Object Relations Perception of Self	.613

Functions at Group Centroids

Phobic Groups	Function 1
Low Phobic T-Score<46	.153
High Phobic T-Score>59	-.504

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Phobic Groups	Predicted Group Membership		Total
			Low Phobic T-Score<46	High Phobic T-Score>59	
Original	Count	Low Phobic T-Score<46	57	45	102
		High Phobic T-Score>59	9	22	31
		Ungrouped cases	45	54	99
	%	Low Phobic T-Score<46	55.9	44.1	100.0
		High Phobic T-Score>59	29.0	71.0	100.0
		Ungrouped cases	45.5	54.5	100.0
Cross-validated(a)	Count	Low Phobic T-Score<46	57	45	102
		High Phobic T-Score>59	9	22	31
	%	Low Phobic T-Score<46	55.9	44.1	100.0
		High Phobic T-Score>59	29.0	71.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 59.4% of original grouped cases correctly classified.
c 59.4% of cross-validated grouped cases correctly classified.

B 15.2 DFA Results of Table 4.15: Women in the Low and High Phobic Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.154(a)	100.0	100.0	.365

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.866	14.330	2	.001

Standardized Canonical Discriminant Function Coefficients

	Function1
EM1 Object Relations Perception of Environment	.849
EM Father Object Relations Perception of Self	.541

Functions at Group Centroids

Phobic Groups	Function 1
Low Phobic T-Score<46	.232
High Phobic T-Score>59	-.652

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Phobic Groups	Predicted Group Membership		Total
			Low Phobic T-Score<46	High Phobic T-Score>59	
Original	Count	Low Phobic T-Score<46	53	23	76
		High Phobic T-Score>59	8	19	27
		Ungrouped cases	36	37	73
	%	Low Phobic T-Score<46	69.7	30.3	100.0
		High Phobic T-Score>59	29.6	70.4	100.0
		Ungrouped cases	49.3	50.7	100.0
Cross-validated(a)	Count	Low Phobic T-Score<46	53	23	76
		High Phobic T-Score>59	8	19	27
	%	Low Phobic T-Score<46	69.7	30.3	100.0
		High Phobic T-Score>59	29.6	70.4	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 69.9% of original grouped cases correctly classified.
c 69.9% of cross-validated grouped cases correctly classified.

B 16.1 DFA Results for Table 4.16: People in the Low and High Paranoid Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.141(a)	100.0	100.0	.352

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.876	12.859	3	.005

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM2 Abandonment	.600
EM Father Abandonment	.542
EM Mother Object Relations Individual Distinctiveness	.541

Functions at Group Centroids

Paranoid Groups	Function 1
Low Paranoid Group T-Scores<43	-.301
High Paranoid Group T-Scores>60	.459

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Paranoid Groups	Predicted Group Membership Low Paranoid Group T-Scores<43	Predicted Group Membership High Paranoid Group T-Scores>60	Total
Original	Count	Low Paranoid Group T-Scores<43	40	21	61
		High Paranoid Group T-Scores>60	12	28	40
		Ungrouped cases	81	63	144
	%	Low Paranoid Group T-Scores<43	65.6	34.4	100.0
		High Paranoid Group T-Scores>60	30.0	70.0	100.0
		Ungrouped cases	56.3	43.8	100.0
Cross-validated(a)	Count	Low Paranoid Group T-Scores<43	40	21	61
		High Paranoid Group T-Scores>60	12	28	40
	%	Low Paranoid Group T-Scores<43	65.6	34.4	100.0
		High Paranoid Group T-Scores>60	30.0	70.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 67.3% of original grouped cases correctly classified.
c 67.3% of cross-validated grouped cases correctly classified.

B 16.2 DFA Results for Table 4.16: Women in the Low and High Paranoid Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.180(a)	100.0	100.0	.390

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.848	12.562	2	.002

Standardized Canonical Discriminant Function Coefficients

	Function1
EM1 Vulnerability to Illness or Harm	.800
EM Mother Negative Affect	.732

Functions at Group Centroids

Paranoid Groups	Function 1
Low Paranoid Group T-Scores<43	-.373
High Paranoid Group T-Scores>60	.469

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Paranoid Groups	Predicted Group Membership Low Paranoid Group T-Scores<43	Predicted Group Membership High Paranoid Group T-Scores>60	Total
Original	Count	Low Paranoid Group T-Scores<43	35	9	44
		High Paranoid Group T-Scores>60	12	23	35
		Ungrouped cases	75	34	109
	%	Low Paranoid Group T-Scores<43	79.5	20.5	100.0
		High Paranoid Group T-Scores>60	34.3	65.7	100.0
		Ungrouped cases	68.8	31.2	100.0
Cross-validated(a)	Count	Low Paranoid Group T-Scores<43	35	9	44
		High Paranoid Group T-Scores>60	12	23	35
	%	Low Paranoid Group T-Scores<43	79.5	20.5	100.0
		High Paranoid Group T-Scores>60	34.3	65.7	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 73.4% of original grouped cases correctly classified.
c 73.4% of cross-validated grouped cases correctly classified.

B 17.1 DFA Results for Table 4.17: People in the Low and High Psychoticism Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.532(a)	100.0	100.0	.589

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.653	32.015	6	.000

Standardized Canonical Discriminant Function Coefficients

	Function1
EM1 Subjugation	-.610
EM1 Object Relations Perception of Others	-.613
EM Mother Dependence/Incompetence	.506
EM Father Defectiveness/Shame	.538
EM Father Object Relations Perception of Self	.995
EM Father Object Relations Perception of Environment	-.488

Functions at Group Centroids

Psychoticism Groups	Function 1
Low Psychoticism T-Score Group<41	.777
High Psychoticism T-Score Group>59	-.668

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Psychoticism Groups	Low Psychoticism T-Score Group<41	High Psychoticism T-Score Group>59	Total
Original	Count	Low Psychoticism T-Score Group<41	28	9	37
		High Psychoticism T-Score Group>59	10	33	43
		Ungrouped cases	65	87	152
	%	Low Psychoticism T-Score Group<41	75.7	24.3	100.0
		High Psychoticism T-Score Group>59	23.3	76.7	100.0
		Ungrouped cases	42.8	57.2	100.0
Cross-validated(a)	Count	Low Psychoticism T-Score Group<41	27	10	37
		High Psychoticism T-Score Group>59	11	32	43
	%	Low Psychoticism T-Score Group<41	73.0	27.0	100.0
		High Psychoticism T-Score Group>59	25.6	74.4	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 76.3% of original grouped cases correctly classified.
c 73.8% of cross-validated grouped cases correctly classified.

B 17.2 DFA Results for Table 4.17: Women in the Low and High Psychoticism Symptoms Groups

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.269(a)	100.0	100.0	.460

a First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.788	13.930	3	.003

Standardized Canonical Discriminant Function Coefficients

	Function 1
EM1 Subjugation	.443
EM1 Object Relations Perception of Others	.646
EM Father Object Relations Perception of Self	-.733

Functions at Group Centroids

Psychoticism Groups	Function 1
Low Psychoticism T-Score Group<41	-.600
High Psychoticism T-Score Group>59	.433

Unstandardized canonical discriminant functions evaluated at group means

Classification Results(b,c)

		Psychoticism Groups	Predicted Group Membership Low Psychoticism T-Score Group<41	Predicted Group Membership High Psychoticism T-Score Group>59	Total
Original	Count	Low Psychoticism T-Score Group<41	15	11	26
		High Psychoticism T-Score Group>59	9	27	36
		Ungrouped cases	26	88	114
	%	Low Psychoticism T-Score Group<41	57.7	42.3	100.0
		High Psychoticism T-Score Group>59	25.0	75.0	100.0
		Ungrouped cases	22.8	77.2	100.0
Cross-validated(a)	Count	Low Psychoticism T-Score Group<41	15	11	26
		High Psychoticism T-Score Group>59	9	27	36
	%	Low Psychoticism T-Score Group<41	57.7	42.3	100.0
		High Psychoticism T-Score Group>59	25.0	75.0	100.0

a Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case. b 67.7% of original grouped cases correctly classified.
 c 67.7% of cross-validated grouped cases correctly classified.