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Attachment and the internal world of children at risk: the South African context

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UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT

DIVISION OF PSYCHOLOGY

ATTACHMENT AND THE INTERNAL WORLD OF CHILDREN AT-RISK

– THE SOUTH AFRICAN CONTEXT

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A Research Dissertation submitted in fulfillment of the requirements for the degree of Doctorate of Philosophy in the Faculty of Humanities, University of the Witwatersrand, Johannesburg.

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or other examination at any other university.

_____

R. GERICKE (Ms.)

8 April, 2019.

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ABSTRACT

Attachment research and clinical practice has tended to focus on four traditional attachment types (i.e. *secure*, *avoidant*, *ambivalent* and *disorganized*). However, for thinking and practice to advance it is critically important that these categories and their assessment be interrogated in different contexts and across developmental age. Furthermore, similarities between attachment and psychoanalytic concepts, particularly between *internal working models* and *objects relations*, are being articulated in the psychoanalytic literature. A group of theorists have positioned themselves as psychoanalytic attachment theorists, bridging attachment theory and psychoanalytic thinking. However, there has been misunderstanding on both sides which needs to be clarified (Fonagy, 1999; 2018). Thus, this empirical research explored possible links between the internal world and attachment development in pre-adolescent children. To answer these questions, a quantitative design was used with descriptive and inferential statistics, and *general linear models* were employed to analyze the data. Questionnaires were administered to 105 children between the ages of eight and twelve from socio-economically deprived contexts with high exposure to trauma. These questionnaires were the *Attachment Story Completion Test*, *Thematic Apperception Test*, *Differential Emotions Scale-IV*, *Social Cognition and Object Relations Scale G* and the *Senior South African Individual Scale – Revised, Similarities* subtest. A staggering 93% of the children had insecure attachments (specifically, avoidant 37%, disorganized 34% and ambivalent 22%) and attachment was more complex than currently conceptualized in the attachment literature. Primary attachment did not only present as one of four discreet categories, but 70% of the sample had a complex attachment with more than one type of attachment style present. *Attachment Intensity* also varied along a continuum (between 1 and 5). Relationships between attachment type and developmental markers (namely: *object relations*, *intensity of emotion* and *defense styles*) were largely not significant in this sample. However, Attachment Intensity was found to: a) moderate the relationship between secure and ambivalent attachments and *Positive Emotionality*; and b) between attachment

complexity and *Emotional Investment in Relationships*; and c) influence *Complexity of Representations of People*, and *Identity and Coherence of Self*. Generally secure attachments were better aligned with object relations than insecure attachments, although disorganized attachments influenced Identity and Coherence of Self. Thus, while points of overlap between attachment and object relations has been foregrounded in the literature, these results contest reflexive theoretical interpretations (Fonagy & Campbell, 2015) that suggest identical overlap between these two constructs, and cast new light on how the interaction between attachment and object relations, intensity of emotion and defense styles can be understood. The findings have implications for research that has not considered complexity of attachment or attachment intensity. Findings also have policy implications for supporting mother-infant dyads, particularly in high risk contexts.

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TERMS AND ACRONYMS

AAI – Adult Attachment Interview

AAPQ - Adult Attachment Prototype Questionnaire

BORRTI - Bell Object Relations and Reality Testing Inventory

CAI - Child Attachment Interview

DSED - Disinhibited Social Engagement Disorder

DSM - Diagnostic and Statistical Manual of Mental Disorders (III, IV and V)

EECR-R - Experiences in Close Relationships Questionnaire-Revised

GLM - General Linear Models

IWM – Internal Working Model

MCAST - Manchester Attachment Story Task

ORI - Blatt's Object Relations Inventory

PTSD - Post-Traumatic Stress Disorder

QOR - Quality of Object Relations Scale

RAD - Reactive Attachment Disorder

RAQ - Reciprocal Attachment Questionnaire

RQ - Relationship Questionnaire

SCORS - The Social Cognition and Object Relations Scale

SCORS-R - Social Cognition and Object Relations Scale – Revised

SEM - Structural Equation Models

WMCI - Working Model of the Child Interview

<u>Data analysis</u>

ANOVA – Analysis of Variance

GLM – General Linear Model

Instruments used in this study

ASCT - Attachment Story Completion Test

CADS - Comprehensive Assessment of Defense Style

DES-IV - Differential Emotions Scale IV

SCORS-G - Social Cognition and Object Relations Scale – Global Rating Method

SSAIS-R - Senior South African Individual Scale – Revised

TAT - Thematic Apperception Test

Study variables

AQR - Affective Quality of Representation

CRP - Complexity of Representation of People

EIR - Emotional Investment in Relationships

EMAI - Experience and Management of Aggressive Impulses

ICS - Identity and Coherence of Self

SE - Self Esteem

INE - Intensity of Negative Emotions

IPE - Intensity of Positive Emotions

OEI - Overall Intensity of Emotion

MD - Mature Defense Style

ID – Immature Defenses

OOD - Other-Oriented Defense Style

SOD - Self-Oriented Defense Style

AR - Abstract Reasoning

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Chapter One: Aims, Introduction and Rationale

1.1 Research Aims

This study was located within a middle childhood sample from disadvantaged backgrounds in South Africa (SA), many of whom are in children's homes, and therefore guardians of the state. In this sample, the study sought to investigate interrelationships between attachment (as articulated by *attachment type*, *attachment complexity* and *attachment intensity*), and markers of internal world functioning (namely, *object relations*, *intensity of emotion,* and *defense styles*). The first aim of the study was to describe the sample in terms of attachment, quality of object relations, intensity of emotion*,* and defenses. The second aim was to conduct an exploratory investigation of interrelations between attachment type, attachment complexity and attachment intensity. The third aim was to analyze attachment type in relation to object relations, intensity of emotion and defense styles, and to consider whether any of these relationships are moderated by attachment complexity or attachment intensity.

1.2 Introduction and Rationale for the Study

In this section I will orientate the reader to the importance of attachment in current psychological thinking; consider the limitations in our understanding of attachment, and the critical impact of developmental age and context on attachment; introduce the debate around the convergence and divergence between attachment and psychoanalytic constructs; and finally, discuss the need to empirically test the conceptual links being made between these two paradigms.

The validity of attachment type as the bedrock of psychiatric and psychological health has been widely and increasingly supported by empirical research. This is evident from the emergence in

recent years of the publications *Journal of Attachment and Human Development* (1999) and *Attachment: New Directions in Psychotherapy and Relational Psychoanalysis* (2007). The *Journal of Psychotherapy Integration* published a special edition on *Attachment theory as a foundation for psychotherapy integration* in September 2011, "due to the extraordinary influence that attachment theory has had on thinking and practice within the field of psychotherapy integration" (http://www.apa.org/pubs/journals/special/5682103.aspx).

The influence of attachment thinking has expanded beyond academia and science to the lay public, with the advent of popular attachment parenting books (Newton, 2008; Sears, Sears, Sears, & Sears, 2013) and many websites offering attachment parenting advice. However, the description of attachment types has not significantly advanced beyond the identification of attachment security or type (namely, secure, avoidant, ambivalent and disorganized). Further to this, most attachment literature and research references the four classic attachment types in relation to various study variables. This practice has continued despite papers arguing for theoretical refinement in the classification of attachment presentations, such as symbolic and concrete infanticidal (disorganized) attachment (Sachs, 2007), or continuous ratings of attachment (Fraley & Spieker, 2003; Kerns, Brumariu, & Seibert, 2011) - although the latter is increasingly favoured in research.

This practice is now being questioned "as increasingly contradictory and less clear-cut data surrounding attachment emerge" (Fonagy & Campbell, 2015, p.229). Debates are also surfacing with regards to what attachment measures assess and therefore whether our assessment tools are accurate (Fonagy & Campbell, 2015). While most studies apply a categorical assessment of attachment, the use of the Attachment Story Completion Test in this study allowed for a continuous assessment of attachment - termed *attachment intensity* - in an empirical investigation of relationships between the study variables. A continuous measure also enables slight variations in attachment patterns to be observed (Kerns, Tomich, & Kim, 2006), thus presenting the potential to capture more complex attachment patterns – termed *complex attachments*. For thinking and

practice in the field to advance, the current classification of attachment needs to be rigorously inspected, and the impact of developmental age and context interrogated. Current attachment measures are criticized for being inadequate in describing attachment in institutionalized and maltreated children (De Klyen & Greenberg, 2016).

The dearth of empirical research on attachment in middle childhood, and particularly so in middle to low income countries (Parrigon, Kerns, Abtahi, & Koehn, 2015) greatly limits the suggestions that can be made to promote mental health in these contexts (Bhana, 2010). Further to this, orphans and vulnerable children facing adversity in sub-Saharan Africa have received very little research attention (Kelley, Brazg, Wilfond, Lengua, Rivin, Martin-Herz, & Diekema, 2016; Muhati-Nyakundi, Kasese Hara & Gwandure, 2017).The children in this study face numerous environmental stressors, including socio-economic adversity; exposure to trauma; and for many, removal from parents after their family home environment is assessed as unfavourable for their physical and/or emotional wellbeing.

The longitudinal study by Waters and colleagues (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000) found that attachment can be disrupted following painful events, such as exposure to trauma; the loss of a parent; or either the parent or child battling a life-threatening illness. This gives cause for great concern when considering the high prevalence of abandonment, trauma and HIV/AIDS in SA. Moreover, according to Richter, Dawes, and de Kat (2010), it is the accumulative effects of exposure to environmental stressors that undermines attachment security. Thirty percent of SA's population are children aged between 0 and 17 and almost two-thirds live in poverty (Hall & Sambu, 2017a).

A study of 10- to 14- year old SA children found that lower socio-economic environments contribute to higher fear levels (Akande, 2000). In addition to this, SA is a violent society, especially towards women and children (Seedat, van Niekerk, Jewkes, Suffla, & Ratele, 2009; Tlhabi, 2017), and is cited as a "hostile context for its children" (Lockhat & van Niekerk, 2000, p.291). Poverty, unemployment and exposure to childhood abuse support the pervasiveness of violence (Seedat et al., 2009).

Consequently, SA is considered a context with high environmental risk for impaired attachments (Pritchett, Rochat, Tomlinson, & Minnis, 2013).

To create as heterogeneous a sample as possible of children in middle childhood from socially-economically deprived contexts, children were drawn from three different sites, namely: children's homes, an inner-city urban school, and an outpatient psychology clinic. The sample was quite evenly distributed according to gender (male 52% and female 48%) and race (Black 45%, White 40% and Other 15%). Many of the children who participated in this study had been placed in children's homes due to abuse and/or neglect.

Bowlby termed orphaned or institutionalized children – that is, those who are denied a consistent maternal caregiver - as facing 'severe maternal deprivation' (Gillibrand, Lam, & O' Donnell, 2011). Almost four million children in SA do not live with either parent (Hall & Sambu, 2017a). However, to date no research on attachment in institutionalized children in SA has been published. More investigation is needed around the impact of culture on attachment in children who have experienced severe neglect and/or abuse (Lynch, 2005). Thus, this research returns to an assessment of attachment in children at risk, which is where Bowlby began his work (1988). It is hoped that, in returning to the environment that informed Bowlby's understanding of the importance of context, we can deepen and advance ours.

My premise is that, once the potential variances in how attachment is distributed in a sample from an impoverished context has been reviewed and accurately reflected, the proposed alignment between psychodynamic and attachment development (Fonagy & Campbell, 2015) suggested by contemporary thinking can be more thoroughly investigated. This research will examine two potential moderating variables between a) attachment and object relations, b) intensity of emotion, and c) defense styles, that have not been explored in the literature. These variables are *attachment intensity* and *attachment complexity*. *Attachment intensity* refers to the extent to which an attachment style is used and is measured according to a five-point Likert scale. *Attachment*

complexity is indicated when the child employs two or more attachment strategies to meet attachment needs.

1.2.1 Contact and departure between attachment and psychoanalytic thinking

Psychoanalytic critiques of attachment theory have at times been based on misapprehension, even prejudice, by writers poorly informed about the empirical observations this body of ideas has generated. (Fonagy & Target, 2007, p.412)

When Bowlby introduced his theory of attachment, he foregrounded the importance of the environment on the development of psychological health at a time when psychoanalysis had sharpened the focus on the influence of the internal world. His ideas were rejected out of hand (Fonagy, 2018) and ultimately Bowlby would break away from the psychoanalytic community. This historical "bad blood" between psychoanalysis and attachment theory (Fonagy, 1999, p.595; 2018) has continued for many years. While a relationship between attachment and psychoanalytic theories was first postulated by Winnicott's acknowledgment of Bowlby's emphasis on deprivation in relation to development (1956/1984), and later by Ainsworth's (1969) diplomatic argument for mutual accommodation between psychoanalytic and attachment theories, it was not until the 1990s that engagement between the paradigms became exponentially more active.

A growing body of psychological thinkers located themselves at the interface between attachment theory and psychoanalytic thinking, which saw the emergence of the psychoanalytic attachment paradigm or '[a]ttachment-related psychodynamics' (Shaver & Mikulincer, 2002). The last decade has seen increased engagement between psychoanalytic theories and attachment theory. The end of the decade culminated in a call for a reunion between attachment and psychoanalysis by Steele and Steele (1998) (entitled *Attachment and psychoanalysis: Time for a reunion*) and Goodman (2002) (entitled *The internal world and attachment*). This engagement has been the most active over the

last few years, as both psychoanalytic and attachment researchers attempt to understand the convergences and divergences between the paradigms.

The psychoanalytic attachment paradigm articulates theoretical convergences between attachment and psychoanalytic theories (see Eagle, 1995, 1997; Blatt, 2003, 2007, 2008; Fonagy, 1999, 2001, 2018; Fonagy, Luyten, Allison & Campbell, 2016; Fonagy & Target, 2007; Holmes, 1993, 1997, 2001; Lamagna, 2011; Shaver & Mikulincer, 2002; Sroufe, 1986; Waters, 1977). The most prolific theoretical comparisons have been made between attachment and object relations (Ainsworth, 1969; Goodman, 2004; Sandler, 2003), intensity of emotion (Gerhardt, 2015; Schore, 1994, 2003; Sroufe, 1990, 2016) and defenses (Colin, 1996; Fonagy, 1999; Fonagy, Steele, Moran, Steele & Higgitt, 1992; Lay, Waters, Posada, & Ridgeway, 1995). Attachment and psychoanalytic theories have perhaps most seamlessly been integrated through relational psychoanalysis (Aron & Leichich, 2011; Emde, 2007; Mitchell, 2000; Mitchell & Aron, 1999; Wallin, 2007).

However, this drive "to seek out areas of conceptual rapprochement and conciliation" (Fonagy & Campbell, 2015, p.229) and thereby rid us of the 'bad blood' has perhaps temporarily blinded us from properly acknowledging the points of departure between psychoanalytic theory and attachment theory. Fonagy called for the 'bad blood' to be revisited to understand the gains and differences, and to find ways to conceptualize the relationship more effectively (Fonagy & Campbell, 2015) as the feud is ongoing (Fonagy, 2018). While Fonagy acknowledges that both the psychoanalytic and attachment paradigms have been guilty of dismissing each other, he concludes 2018 with the provocative announcement; "Bowlby seems guilty of combating a psychoanalytic straw man." (p.ii). This study will critically evaluate the data from empirical studies, and attempt to provide a balanced assessment of key constructs from the psychoanalytic and attachment paradigms.

1.2.1.1 Internal working models and object relations

Ainsworth (1969), Sandler (2003) and Goodman (2004) are among several theorists who have explored the conceptual overlap between Bowlby's *internal working models* and the psychodynamic idea of object relations, but do not define them as identical. However, the integration of attachment and object relations is seen in the development of the *Attachment and Object Relations Inventory* (Buelow, McClain & McIntosh, 1996). The importance of high levels of responsiveness and affect regulation by the primary caregiver is stressed by both attachment research (Ainsworth, 1982), object relations (Winnicott, 1956/1990; Bion, 1967) and neuroscientific research (Gerhardt, 2015). The theoretical, research, and clinical benefits of the diagnostic attachment classification system can be deepened by interrogating its articulation to object relations in a sample of children in middle childhood from impoverished backgrounds. If there is overlap between attachment and object relations, we can perhaps map the internal world of both object relations and attachment representations. The literature is not clear as to whether the process of recognizing and incorporating an attachment figure (experienced as an enduring affectional tie) is similar to the psychoanalytic process of representing an internal maternal object. This relationship will be unpacked in chapter four.

Bowlby (1965) states that how an infant's attachment needs and experiences of separation and loss are dealt with will determine the foundation of his/her future psychological health. Although this appears conceptually straightforward, it seems deceptively so, for it denies the complicated, multi-dimensional internal processes, bloodshed, pain, and anxiety the infant must face to withdraw from an attachment figure, or eventually experience a feeling.

1.2.1.2 Attachment, intensity of emotion and defense styles

Whilst research since the 1970's has steadily sought to describe the relationship between attachment and affect regulation in children, empirical research investigating attachment in middle

childhood in relation to affect (Graham & Easterbrooks, 2000; Kerns, Abraham, Schlegelmilch, & Morgan, 2007; Parrigon et al., 2015) and defenses (Robinson, 2013) is very limited. Attachment patterns are seen as defensive behaviours that help the child to manage interactions with caregivers (Colin, 1996; Fonagy, 1999; Fonagy et al., 1992; Lay et al., 1995). Research by Robinson (2013) reported no significant correlation between defense and attachment types (she used data collected by the researcher for her analysis). However, what remains unclear is whether attachment styles are comparable to psychodynamic defense styles.

In addition to exploring attachment in relation to psychodynamic defense styles, this study will also investigate attachment in relation to affect regulation. In attachment theory, the relationship with the caregiver is characterized by an intense love-hate relationship that is exacerbated when separation between mother and child is premature (Bowlby, 1957/1979). In attachment-impaired children intense affect weakens the security of the affectional/attachment bond. This research explores whether there is a relationship between intense emotional experiences (positive, negative and overall) and attachment type; and whether such a relationship would be moderated by attachment intensity or attachment complexity. Moreover, this study will address whether the relationship observed between security and competence in emotional regulation in Western societies (Kerns et al., 2006; Morelli & Rothbaum, 2007; Parrigon et al., 2015; van Ijzendoorn & Sagi-Schwartz, 2008) will be replicated in non-Western societies.

1.2.2 Quantitative empirical research

To describe the pattern of attachment categorization in the sample, to articulate relationships between attachment and markers of internal world functioning, and to counteract the controversy surrounding the paucity of empirical validation for the purpose of psychoanalysis (Fonagy & Target, 2002), a quantitative research design was employed. Psychoanalytic models have been strongly criticised for being epistemically weak by depending on an over-elaboration of theory (Fonagy, 1999) to support their ideas.

Attachment theory on the other hand is seen to provide the field with empirically verifiable constructs that support the importance of the early mother-infant relationship. However, while the link between psychoanalysis and attachment theory is well-conceptualized by the likes of Eagle (1995, 1997;), Blatt (2003, 2007, 2008), Holmes (1993, 1997, 2001), Fonagy and colleagues (1992, 1999, 1999b, 2001, 2002, 2005, 2007, 2007b, 2015) and Sroufe (1986), comparatively little quantitative empirical research has been conducted to test the conceptual links being made. By engaging in a quantitative analysis of relationships between key theoretical constructs from both schools, further empirical evidence can be obtained to support or dispute this relationship.

Fonagy and Target (2002) advocate for empirical validation of psychoanalysis and its therapeutic efficacy to help counteract the controversy, since empirical data cannot be easily dismissed.

> The Empirically Based Treatments movement is a method for the integration of the clinical knowledge base, which, if pursued with thoughtfulness and rigor, will enhance our understanding of clinical work and yield improved services for a disadvantaged and underserved group. (p.28)

1.3 Conclusion

Once the nature of attachment has been assessed - through this sample of middle childhood children from disadvantaged backgrounds - this research aims to build on the existing body of attachment literature by deepening understanding of attachment in a more non-Western, socio-economically deprived context. Thereafter, some of the critical dialogue and research on convergences and divergences between psychoanalytic and attachment theory will be explored, by examining attachment in relation to object relations, intensity of emotion and defense styles. In reviewing the literature, I will identify theoretical and empirical gaps, and where pertinent, raise questions that this study will attempt to address.

At present, this is a burgeoning theoretical field that needs further elaboration, sophistication, research (Fonagy, 1999), and shifts (Fonagy & Campbell, 2015) to provide empirical substantiation for proposed relationships between key constructs. Furthermore, this is the first known empirical research exploring attachment complexity and attachment intensity as potential moderating variables. Thus, this research is conducted in response to the psychoanalytic attachment paradigm.

This study is an attempt to both help build the requisite empirical foundation, and simultaneously assist clinicians in understanding the attachment world of children at risk, by exploring the relationship between attachment and the internal world. Although epistemologically distinct, the differences or convergences between psychoanalysis and attachment theory can enrich both schools of thought through deeper understanding of their relationship.

1.4 Structure of the thesis

Chapter One

This chapter introduces the study, provides a rationale for the study and outlines the thesis structure to guide the reader.

Chapter Two

Attachment theory and research to date is explored in this chapter. This includes internal working models and attachment states of mind, attachment in middle childhood, the classification and assessment of attachment, attachment intensity, and multiple attachment figures.

Chapter Three

Attachment in context is investigated by considering the influence of culture, trauma and impoverishment (socio-economic and maternal) on attachment.

Chapter Four

This chapter explores points of theoretical and empirical convergence and divergence between attachment and psychoanalytic theory. This exploration begins by investigating early psychoanalysis and Bowlby's break from the psychoanalytic community, so as to understand his position in relation to psychoanalysis. The chapter then considers whether attachment states of mind are comparable to object representations. To engage with this debate appropriately, object relations are conceptualized before interrogating a relationship with internal working models. Phrased differently, in both the metaphorical and literal sense, the question is posed: is the infant found in the mother's arms, or is she mirrored in her mother's eyes? Following this discussion, the relationship between attachment and development of self is surveyed in brief. The chapter concludes with an investigation of attachment in relation to intensity of emotion and defense styles.

Chapter Five

The sample is described as well as the method employed to obtain and analyze the data outlined.

Chapter Six

Here the results for each research question are presented. These research questions will fulfill the broader research aims outlined in the beginning of the chapter.

1. How is attachment distributed in a sample of SA children who are socially and economically disadvantaged?
2. What are the relationships between the various attachment types, attachment complexity and intensity of attachment?
3. Does *attachment complexity* moderate the relationship between attachment type, and object relations, intensity of emotion and defense styles respectively, in the sample?
4. Does *attachment intensity* moderate the relationship between attachment type, and object relations, intensity of emotion, defense styles and attachment complexity respectively, in the sample?

5. What is the relationship between attachment and object relations?

Chapter Seven

This chapter comprises a discussion of the distribution of attachment and other study variables in a sample from middle childhood in an impoverished context. Points of meeting and departure between attachment and psychoanalytic theory are then discussed, specifically concerning attachment in relation to object relations, intensity of emotion and defense styles.

Finally, conclusions from the research are drawn, policy implications of the results discussed, limitations associated with the research carefully considered, and directions for future research proposed.

Chapter Two: Attachment

Terms and Acronyms: Chapter Two

AAI – Adult Attachment Interview

CAI - Child Attachment Interview

DSED - Disinhibited Social Engagement Disorder

DSM - Diagnostic and Statistical Manual of Mental Disorders (III, IV and V)

IWM – Internal Working Model

RAD - Reactive Attachment Disorder

This chapter will explore the attachment literature to understand what is meant by attachment; and then examine the process of becoming attached, internal working models (IWM) and attachment states of mind, and the classification of attachment which is impacted on by how attachment is measured. Thereafter, I will review the thinking on attachment patterns (referred to as *attachment complexity* in this study) and multiple attachment figures. The chapter will conclude with a discussion of attachment in middle childhood.

2.1 Introduction to Attachment

Evidence is accumulating that human beings of all ages are happiest and able to deploy their talents to best advantage when they are confident that, standing behind them, there are one or more trusted persons who will come to their aid should difficulties arise. The trusted person, also known as an attachment figure, can be considered as providing his (or her) companion with a secure

base from which to operate. (Bowlby, 1957/1979, p.103)

The process of becoming attached is biologically driven and genetically determined, and occurs during the years of rapid brain growth (Gerhardt, 2015). While the child's potential developmental pathways are determined by genetics (Bowlby, 1988), the environment that the infant is exposed to interacts with these genetic possibilities to trigger development along a specific pathway. A healthy environment will trigger development along healthier pathways. An unhealthy environment (such as a neglectful, abusive or stressful environment) will trigger development along less healthy pathways (Bowlby, 1988; Wieder & Greenspan, 2005). During this period of heightened brain plasticity, synaptic connections are pruned or over-produced depending on stimulation from the environment (Glaser, 2000). Thus, to allow for the establishment of a secure attachment, emotional and physical stimulation by the caregiver needs to be presented to the infant in a predictable manner, consistent with his/her developmental needs.

Ainsworth, a contemporary of Bowlby's, stressed 'sensitive parental responsiveness' as critical in determining the security of the attachment relationship (1978). Stated differently, Ainsworth's (1982) emotionally responsive parent regulates behaviour by helping the infant to organize and understand his/her world through interpreting his/her behaviours. Thus, the structure of the brain is determined by the interaction between genetics and the environment. It is important to note that attachment is conceptualized as an organizational structure (Blatt, 2008; Hazan & Shaver, 1994; Sroufe & Waters, 1977).

More simply stated, attachment is an evolutionary instinct, aimed at keeping mothers and their babies in close physical proximity to each other to ensure survival (Bowlby, 1957/1979). The infant is born vulnerable and dependent on another for his/her survival: the "function of attachment is to protect the young and vulnerable of the species from danger" (Howe, 2005, p. 3). Thus, all children, regardless of the quality of their environment, seek a figure to attach to (Bowlby, 1969/1982). However, for attachment to occur, it is not merely the child's instrumental needs that must be met,

but also his/her emotional needs, such as when the child feels tired, sick, sad or scared.

Harry Harlow's (1958) famous study on attachment in baby rhesus monkeys found that these monkeys, removed from their mother and placed in a cage with a wire mother and cloth mother, preferred to spend time with the mother they could cuddle with. He concluded that the need for comfort and security is *a priori* to the need for food. Serious ethical issues were associated with the study; and the consequences of the maternal deprivation suffered by these monkeys manifested as aggressive and delinquent behaviour when placed with other monkeys, and neglect or abuse in relation to their own offspring. 'Maternal deprivation' was coined by Bowlby (1951) in his report on the mental health of European children orphaned and institutionalized by World War II.

Attachment requires a "warm, intimate and continuous relationship with the mother in which both find satisfaction and enjoyment" (Bowlby, 1953/1965, p.13). The biological mother is primed to fulfil the role of primary attachment figure, as oxytocin, norepinephrine and opioids are released to promote bonding (Buchheim et al., 2009; Insel, 1992; Nelson & Panksepp, 1998). Infant research has shown that infants recognize both their mother's voice, and the smell of her breast milk (Gerhardt, 2015). However, anyone who assumes the role of primary carer can become the primary attachment figure.

If the infant's signals for care, warmth and physical proximity are repeatedly and appropriately responded to, the infant can feel secure in the attachment relationship by approximately nine months of age (Bowlby, 1979). However, the infant's attachment state of mind remains sensitive to parental responsiveness until around the age of five.

Bowlby (1969/1982) described four phases of attachment during which attachment becomes increasingly more selective and cognitively sophisticated: a) in the *pre-attachment* phase between birth and two months, attachment is not selective; b) during *attachment in the making* from two or three months to six months, the infant starts to orientate towards a primary attachment figure;

c) during *clear cut attachment* between 7 months and three years, the child actively discriminates between the primary caregiver and strangers; and d) *goal-directed attachment* thereafter, when the child is able to engage in a more reciprocal relationship with others, and to consider their intentions.

Boris and Zeanah (2005) described the process of becoming attached in a subtly different way: a) from birth, the infant recognizes the mother's voice and smell; b) by around six months of age, attachment becomes more selective; c) between eight months and three years of age, attachment is preferential; and d) from three onwards, the child can engage in a reciprocal relationship with the caregiver and others. Ainsworth (1969) references this last phase as beginning around the age of four.

As attachment behaviours are primarily aimed at maintaining physical proximity to the attachment figure, the infant experiences distress in response to separation from the primary attachment figure. Bowlby (1969) identified four main stages during the initial attachment phase should the infant be prematurely separated from his/her mother. Initially, the infant will actively attempt to maintain physical proximity to the mother, as premature separation results in anxiety for the infant or toddler (Bowlby, 1969). Following her continued absence, the infant protests loudly against the separation (from 3 months of age), in the hope that the mother will return (as seen in the behaviour of screaming, crying and flailing the arms about). If she continues to remain absent the infant, despairing, gives up the hope of her eventual return and mourns her loss. This manifests as passivity, depression or a quiet impassiveness. Finally, the infant detaches and defensively denies any need of her. His/her hope of being in relation to the mother is lost. This child will suffer feelings of gross guilt, retribution and depression, to name a few (Cassidy & Shaver, 2016); and in later development, will have to contend with superficiality and difficulties in experiencing real feelings (Bowlby, 1953/1965).

Thus, how the infant's attachment needs and experiences of separation and loss are dealt with, will form the foundation of his/her future psychological health and well-being (Bowlby, 1969/1982).

However, such a conceptualisation of attachment and how the environment impacts on attachment is linear and doesn't allow for variability in attachment responses to the environment.

2.2 Internal Working Models and Attachment States of Mind

An infant whose attachment needs have been dismissed by an emotionally unavailable mother, continues to anticipate that his/her needs will be dismissed as a child, and later as an adult. Bowlby referred to these internalized self and other relational models as "internal working models" (1969/1982). These models remain active from "the cradle to the grave" (Bowlby, 1988, p.82). The adult "expects to be perceived and treated … in ways that would be appropriate to his self-model, and … continue(s) with such expectations despite contrary evidence" (Bowlby, 1979, p.141 - 142).

IWMs are therefore memory structures of the child's *real*, repeated, early experiences with the caregiver and significant others (Bolton, 2010). These IWMs help infants to anticipate their mother's behaviour during absences (Bowlby, 1973). However, this continues into adulthood where interactions with others are anticipated to be the same (Renn, 2010). Main, Kaplan and Cassidy (1985) suggest that IWMs be conceptualized as templates through which later relationships are filtered.

Attachment is therefore *learnt,* although temperament can influence how distress at separation is expressed (Pearce, 2009). Informed by repeated experience, the IWMs include a perception of personal worth and of the trustworthiness of significant others (Senior, 2009). Thus, IWMs are *learnt* from *real* experiences that have created *memory structures,* and are the basis for expectations of future interactions. Stated differently, an attachment *state of mind* is created.

Very importantly, an attachment *state of mind* (George, Kaplan, & Main, 1985; Main & Hesse, 1990) refers to the ability to create a sense of security and positive self-regard through reflective functioning (or mentalizing), rather than through the re-activation of an IWM (Luyten, 2015).

Mentalization or “mind-reading” in the child (Fonagy, Gergely, & Target, 2007, p.314) refers to the capacity to consider the intentional and emotional states in oneself and others (Renn, 2010). An attachment state of mind in adults is assessed by exploring memories and accounts of childhood relationships (Levy, Blatt, & Shaver, 1998).

As it is recognized that attachment states of mind are open to change or can be inconsistent, some measures, such as the Adult Attachment Interview (AAI), score the ‘current state of mind’ with respect to attachment. In other words, a person can move between, for example, a secure and an avoidant attachment state of mind. This fluidity suggests a complexity to the classification of attachment that is not explored in the literature. Another characteristic of attachment is that it is intergenerational (Fonagy, Fonagy & Steel, 1991). A parent’s attachment state of mind influences how s/he orientates their child’s state of mind in terms of the child’s anticipating whether the environment will meet or fail his/her attachment needs. However, a parent who can openly and coherently reflect on their own early attachment experiences can provide a different, secure attachment experience for their child (Slade, Grienenberger, Bernbach, Levy, & Locker, 2005).

2.3 Attachment Classifications

Initially, Bowlby (1979) termed attachment as anxious or secure after studying the behaviour of Romanian orphans who had been institutionalized following World War II. However, to avoid the pathologizing of ‘normal’ attachment behaviours in response to environmental cues, he re-termed ‘anxious’ as ‘insecure’. Bowlby was careful to stress that attachment behaviours are part of a healthy developmental trajectory, and was prudent to distance himself from pathologizing health.

His colleague Ainsworth (1978) developed these categories further, by specifying a *secure*, *insecure-avoidant* and *insecure resistant-ambivalent* category. In this study, Ainsworth’s descriptions of attachment behaviour during the Infant Strange Situation Test, and the corresponding adult

behaviours as described by Mary Main (Hesse, 1999), will be drawn on to describe the attachment categories. During the Infant Separation Test, the infant is observed during repeated three-minute separations from the parent, exposure to a stranger, and reunions with the parent.

- Secure attachment: The infant shows clear preference for the parent and visibly misses the parent during separations; and later as an adult, values attachments but is nevertheless able to remain objective when reflecting on early attachment relationships.

- Avoidant attachment: The infant inhibits emotional expression and avoids expressing any need for the parent. As an adult, the importance of attachment experiences are dismissed and generalized descriptions of significant others provided.

- Resistant or ambivalent: The infant is preoccupied with the parent and may be distressed prior to separations, although the parent is not able to comfort the child. These infants may also appear angry or passive. The adult continues to remain preoccupied with their own early attachments as well as later attachment experiences, tending to be angry, fearful or passive.

The complexity of attachment in children at-risk was further explored by Crittenden (1988), who maintained that attachment is a component of the relationship with the parent that is vital for survival; thus, even in maltreated children it persists. However, the attachment behaviours observed by Ainsworth, and their meanings, may not be transferable to maltreated children, or to children from different racial or socio-economic profiles. Initially, an unexplained finding of Ainsworth's study was the high incidence of security in maltreated children. To understand this better, Crittenden reviewed the tapes from Ainsworth's study and identified key differences in the secure behavior of maltreated and adequately-raised children. The secure behaviours in the maltreated group were coded as *avoidant-ambivalent* by Crittenden. This pattern was renamed by Main and Solomon (1990) as *insecure-disorganized* to describe the behaviour of infants, children or adults who are very anxious.

- Disorganized: Disorganized attachment can be defined as the absence of an organized, coherent strategy for dealing with stressful situations (Van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). The infant is not able to organize him or herself, even in the presence of the parent. Faced with frightened or frightening parents, these children have not developed an organized strategy for dealing with their fear. Disorganized behaviours in the presence of the parent includes showing fear, freezing, contradictory behaviours such as avoiding the parent the child demonstrably missed during separation, or stereotypical behaviours such as hair pulling when distressed. Behaviours are therefore disorganized. Whilst child maltreatment is often an antecedent for disorganization, a parent who is experiencing grief or trauma can also be experienced as frightening for an infant. Due to the influence of the current environment on the presence of disorganization, this classification shows less stability across time. For example, an adult's thoughts may become disorganized and dissociated, especially when speaking of loss or of experiences of prior abuse.

In 1980, the Diagnostic and Statistical Manual of Mental Disorders-III (DSM-III) recognized a severe form of attachment impairment, named *Reactive Attachment Disorder* (RAD) (Rutter, 2010). This was revised in the DSM-IV (1994) to include an inhibited and indiscriminate subtype to describe children who are not able to be comforted by a potential attachment figure, as well as children who attach indiscriminately to any available adult. In a study by Chaffin and colleagues (2006), the attachment behaviours of at-risk infants were coded by experienced clinicians using the criteria for RAD; as well as additional categories or ways of conceptualizing attachment (Zeanah & Boris, 2000).

In addition to the RAD subtypes, the clinicians also coded *nonattachment* (with emotional withdrawal and indiscriminate sociability subtypes); *disordered attachment* or *secure base distortions* (the child is inhibited around the attachment figure, does not use the attachment figure for cues about potential dangers, or assumes the caregiver role in relation to the attachment figure);

and *disrupted attachment* (premature separation from the attachment figure) (Zeanah & Boris, 2000; Boris, Zeanah, Larrieu, Scheeringa, & Heller, 1998).

Following the recommendations made by Zeanah and his colleagues (Boris, Zeanah et al., 1998; Chaffin et al., 2006; Zeanah & Boris, 2000) that the DSM-IV classification of RAD be revised, the current DSM-V (APA, 2013) allows now for the classification of two types attachment disorders, RAD and *Disinhibited Social Engagement Disorder* (DSED). These disorders can be diagnosed from as early as nine months, need to present by five years of age to receive a diagnosis, and must not be comorbid with autistic spectrum disorder. RAD is indicated by:

A. A child who is generally not able to seek or receive comfort from an adult caregiver when feeling distressed because of poor care received (see criterion C).
B. Poor emotional or social functioning as indicated by low positive emotionality, displays of unprovoked negative affect (sadness, irritability and fearfulness), and/or limited emotional and social responsiveness in interactions.
C. A history of extreme impoverished care, such as deprivation of basic emotional needs; or frequent changes in primary and thus potential attachment figures or context, which greatly hinders the child's opportunities to form a primary attachment. For example, this is noted in children's homes.

Here it is important to note the direct link between environment (or care received) and consequent behaviours, as outlined by the American Psychiatric Association. Poor care (see criterion C above) can also result in DSED, where a child displays indiscriminate familiarity to any adult, including strangers.

Other than the four classical attachment categories (i.e. secure, avoidant, ambivalent and disorganized), and the two attachment disorders recognized by the DSM-V (i.e. RAD and DSED), development in the categorization of attachment has been slow. Zeanah advanced his own classification system and introduced a *nonattached* category to describe the absence of an

attachment, as opposed to an impaired attachment (Zeanah, Mammen & Lieberman, 1993). In the nonattached child, there is no attachment to any person at all, as opposed to the child who is insecurely attached but nevertheless maintains an attachment. For Holmes (1997), the capacity to be nonattached has a positive component, as it enables an individual to transcend traumatic pain and make meaning out of painful experiences.

Kahr (2007) referred to an *infanticidal disorganized attachment* to parents who are perceived, in fantasy, as wanting to harm or kill their infants. The perceived intention of these parents is hidden. Very disquieting, Sachs (2007) subdivides this classification to describe a symbolic and concrete infanticidal attachment to account for parents who really do wish to kill their infants or children (i.e. concrete). In such cases, the infant or child's anxiety is only abated when in proximity to the murderous or violently abusive parent.

Schore (2003; 2018) added *earned secure* to represent an initially insecure attachment that has become secure following later reparative experiences. The importance of continuing to refine attachment disorders and criteria, and standardized measures for the assessment of attachment, is stressed by Zeanah and colleagues (Zeanah et al., 1998). It is interesting that most development in the classification of attachment has been in the refinement of the disorganized category.

2.4 Measurement of Attachment and Attachment Intensity

In classifying attachment, it is important to consider whether attachment is continuous, dimensional or categorical (discussed above). To address the continuous, dimensional, categorical query, groundbreaking research by Fraley and Spieker (2003) applied a sophisticated taxometric analysis to the Strange Situation behavior of 1 139 fifteen-month-old infants. The technique allows the data to reveal if there is a natural underlying structure, rather than imposing one through using techniques such as cluster analysis, which searches for groupings. Their research made an interesting discovery:

in most studies, the behaviours typically used to rate attachment as secure, avoidant or ambivalent-resistant do not organize around discreet categories. Rather, attachment patterns tend towards continuous organizing around proximity seeking behaviours versus avoidant behaviours, and around anger and resistance.

They theorize that, to date, the usefulness of attachment categories in research can be explained because these categories access underlying attachment dimensions. Dimension refers to the observable attachment behaviours that are enacted to realize the attachment goal. For example, an infant would seek proximity to the attachment figure (a dimension of attachment) to feel secure (the attachment goal). The researchers conclude that the categorical and dimensional components of attachment should be considered to both further the development of attachment, and describe attachment *patterns*. This position is supported by van Ijzendoorn & Bakermans-Kranenburg (2014).

However, it is important to distinguish between tapping continuous dimensions of attachment (such as proximity seeking versus avoidance) and continuous measures of attachment categories. Continuous dimensions of attachment refer to the extent to which specific attachment behaviours can be observed in an individual, while continuous measures of attachment refer to how secure or insecure someone is, scored according to a Likert scale.

As attachment is indicated by the intensity of attachment behaviours (Ainsworth, 1969), I chose to use a continuous measure of attachment rather than a purely categorical scale. Increasingly researchers are using continuous measures of attachment to recognize that attachment is more complex than four categories which continuous measures are better able to capture. Although Ainsworth used a continuous rating scale when scoring attachment behaviours (as secure, avoidant or resistant-ambivalent), she employed a typological attachment model to foreground the primary attachment pattern. Similarly, when Main and Solomon (1990) introduced the disorganized category of attachment, they applied a continuous rating scale that measured felt security along a continuum from very secure to not attached.

While attachment measures such as the *AAI* (George, Kaplan & Main, 1985), *Child Attachment Interview* (CAI) (Target, Fonagy & Shmueli-Goetz, 2003), *Relationship Questionnaire* (Bartholomew & Horowitz, 1991), *Maternal Antenatal Attachment Scale* (Condon & Corkindale, 1997), *Story Stem methods* (Granot & Mayseless, 1999; Kerns, 2013), *Reciprocal Attachment Scale* (West, Sheldon & Reiffer, 1987; West & Sheldon-Keller, 1994), *Security Scale* (Kerns, Aspelmeier, Gentzler & Grabill, 2001), *the Prenatal Attachment Inventory* (Muller, 1993) and the *Adult Attachment Prototype Questionnaire* (Westen & Nakash, 2005; Westen et al., 2006) apply continuous rating scales, research continues to apply the overriding attachment type when analyzing data, as the typological model of attachment has persisted.

Kerns (Kerns, Brumariu & Seibert, 2011) uses continuous ratings of the four classical attachment types to describe, for example, a child who is more secure and less avoidant. However, I am not aware of any research that has considered the continuous ratings of attachment in relation to children at-risk, or in relation to internal world functioning. To capture a more complete and accurate understanding of attachment and its alignment with internal world functioning, my research will therefore investigate both the categorical and continuous component of attachment to describe attachment patterns, and to articulate relationships.

2.5 Multiple Attachment Figures and Attachment Complexity

While the infant seeks an intense, single attachment to a primary figure (Bowlby, 1958), he/she establishes independent attachments to each parent (Main, Kaplan & Cassidy, 1985; Renn, 2010; Steele & Steele, 2008) and can form multiple attachments (Bowlby, 1969; Zeanah & Smyke, 2008). Infants can display a different attachment style with each parent from as early as 12 months of age (Levy, Blatt & Shaver, 1998). This “confirms the emerging concept of multiplicity – that our sense of self is represented by multiple states of mind” (Meehan & Hawks, 2013; Renn, 2010, para.33).

Children are raised by multiple caretakers including relatives and nannies. In the context of multiple caregivers, Mageo (2013) refers to an overriding pattern of care that contributes to the baby's sense of security. Similarly, while van Ijzendoorn and Sagi-Schwartz (2008) conceptualize of an attachment network, they nevertheless imagine that these figures will cohere to form an integrated IWM. The CAI is designed to assess an overarching "state of mind with respect to attachment" by combining the attachment scores to both parents (Target et al., 2003, p.14). However, other theorists conceptualize attachment as hierarchical so that one figure dominates (Bowlby, 1969; Main et al., 1985). While there may be multiple attachment figures, Etaugh maintains that:

> attachment behaviour in infants and preschoolers … indicate that the strength of attachment to the mother is a function of the quality and intensity of mother-child interactions, rather than the sheer availability of the mother or the number of caretakers. (1974, p.90)

While empirical studies exploring complex attachment configurations are very limited, a meta-analysis of 80 attachment studies found that 25% of the studies reported a primary classification of disorganization with a secondary attachment classification (namely, resistant-ambivalent 46%, avoidant 34% and secure 14%) (van Ijzendoorn, Schuengel & Bakersman-Kranenberg, 1999). Thus, while an attachment network is conceptualized in the literature, it is debated as to whether the parental attachment figures cohere to form an integrated attachment state of mind or additional states of mind.

Kerns, Tomich and Kim (2006) hypothesize that peer attachment bonds forged in later childhood will be additional, and not influence parent-child attachments. These subsidiary attachments are arranged hierarchically with parental attachments at the apex (Bowlby, 1982) including during middle childhood (Kerns et al., 2006). An innovative study by Siebert (2007) showed that children in middle childhood tend to make use of secondary/subsidiary attachment relationships (such as peers and siblings) when feeling scared or sad although parents remained the primary attachment figures.

2.6 Attachment in Middle Childhood

Research on attachment during middle childhood has increased (Kerns & Brumariu, 2016) but is still in need of further empirical attention (Kerns et al., 2007; Miller, 2010). Middle childhood encompasses the years 7 to 12 (Kerns & Brumariu, 2016; Sadock, Sadock & Ruiz, 2017). During this period, the child becomes more aware of how he/she is perceived by others as social integration becomes increasingly important, and the self-concept is actively developed (Bhana, 2010).

Main, Kaplan and Cassidy (1985) first proposed that attachment moves to the level of representation in childhood and adulthood. Kerns and colleagues are contemporary researchers leading the exploration of attachment in middle childhood (Kerns, 2008, 2013; Kerns & Brumariu, 2016; Kerns, Klepac, & Cole, 1996; Kerns, Tomich, Aspelmeier, & Contreras, 2000; Kerns, Aspelmeier, Gentzler, & Grabill, 2001; Kerns, Brumariu, & Siebert, 2011; Kerns, Tomich, & Kim, 2006; Kerns, Abraham, Schlegelmilch, & Morgan, 2007; Parrigon, Kerns, Abtahi, & Koehn, 2015).

According to these authors, attachment moves to the level of representation during middle childhood, as the child draws on internal representations of the attachment figure or IWMs to provide comfort, rather than seeking physical proximity to the mother. In other words, in middle childhood the IWMs represent the attachment state of mind. IWMs are cognitive constructs linked to procedural and declarative memory, "to maintain representations linked to the *behavioural attachment system* experienced in the presence of the object of attachment" (Botbol, 2010, p.265). In middle childhood this memory is revealed through language and how the mind is structured (Main, Kaplan & Cassidy, 1985). For example, children who displayed disorganized and fearful behavior as infants may show role reversal in middle childhood, where they become the controlling parent (Main & Cassidy, 1988). These behaviours are employed to protect the child from the parent who continues to be experienced internally as frightening (Solomon, George, & De Jong, 1995). However, the intensity and frequency of attachment signals decreases in middle childhood (Bowlby, 1982).

While research on infant attachment classifications has reported stability into adulthood (Collins & Read, 1990; McConnell & Moss, 2011; Main, Kaplan & Cassidy, 1985; Waters, Hamilton & Weinfeld, 2000; Waters, Merrick, et al., 2000), research has also reported that these models are open to change (Luyten, 2015; Zeanah, Anders, Seifer & Stern, 1989). Later experiences with an attachment figure - or trauma - can impact on the security of the attachment state of mind (Bowlby, 1979). A longitudinal study of attachment patterns from infancy to early adulthood confirmed Bowlby's hypothesis that, while attachment security tends to be stable across time, attachment can be impaired following negative life events. These events include threats to the security of the attachment relationship or family system (for example divorce, loss of a parent, parental psychiatric disorder, or a life-threatening illness experienced by parent or child), and familial physical or sexual abuse (Fraley, 2002; Konrath et al., 2014; McConnell & Moss, 2011; Waters et al., 2000).

Conversely, improvement in the security of the attachment relationship has been shown following therapeutic interventions with parents (Murray & Cooper, 1994). This capacity for change is explained by research focused on the underlying neurology of attachment. Due to brain plasticity throughout life, the brain and IWMs continue to adapt to the demands of the environment (Belsky & de Haan, 2011; Siegel, 2001). Adoption studies have demonstrated how severely impaired attachments can be dramatically modified following placement with adoptive parents (Chisholm, 1998). However, without intervention or change in the sensitivity of parental responsiveness to the needs of the child (Bretherton & Munholland, 2008), the child continues to anticipate that the environment will mimic the relationship with their early primary caregiver. Generally, studies investigating the stability of attachment in the preschool years are inconclusive, as some suggest high stability (O'Connor, Rutter & the English and Romanian Adoptees Study Team; 2000; Main & Cassidy, 1988) while others don't (McConnell & Moss, 2011). Kerns and Brumariu (2016) question whether attachment is open to reorganization during the years 8 to 10.

During middle childhood, avoidant and ambivalent attachment do not appear to be distinctive (Kerns & Brumariu, 2016). The reasons for this are unclear and the authors query whether our current assessment measures are able to sufficiently capture attachment patterns in middle childhood, or whether children previously classified as avoidant or ambivalent manage better during middle childhood.

However, the literature assumes a simple or one-dimensional model of attachment. In other words, the assumption is that a predominant attachment state of mind replaces another, following a negative life event or a positive attachment intervention (for example, a secure attachment is replaced by an ambivalent attachment following a disruption to the attachment relationship). This model does not allow for the possibility that following a disruption or positive attachment intervention, the repertoire of attachment states of minds available to the child can change. For example, following a positive therapeutic intervention, an avoidantly attached child internalizes the expectation that attachment needs can be met, and therefore also develops a secure attachment template on which to draw.

In this way, the secure attachment template does not replace the previous avoidant attachment template but becomes part of an attachment repertoire or network. The suggestion of an attachment network is potentially supported by the view that infants can form multiple attachments (Bowlby, 1969; Meehan & Hawks, 2013; Renn, 2010; Zeanah & Smyke, 2008) (explored further below). If attachments are complex and fluid, it may account for the inconclusive findings regarding the stability of attachment across an individual's lifespan, as studies reflect the attachment state of mind at the time of testing, rather than the repertoire of attachment states of mind available to the person. This points to the critical importance of interrogating our understanding of attachment and how it configures, before we can accurately assess and investigate attachment in relation to intrapsychic developmental markers.

Chapter Three: Attachment in Context

Terms and acronyms: Chapter Three

MCAST - Manchester Attachment Story Task

RAD - Reactive Attachment Disorder

WMCI - Working Model of the Child Interview

An important direction for future research to consider is the nature and role of attachment in a variety of circumstances. For example, there may be cultures in which children rely on several "principal" attachment figures that include extended relatives, as well as parents. We know of no studies in middle childhood that have examined attachments for children who have little contact with their parents. (Kerns & Brumariu, 2016, p.360).

In the following section attachment is explored in context, specifically in relation to culture, trauma, and deprivation (socio-economic and maternal). For the purposes of this research, children exposed to socio-economic and/or maternal deprivation are considered as children at-risk, and therefore opportunities to create a secure attachment are at risk (Minde, Minde& Vogel, 2006; Tomlinson, Cooper, & Murray, 2005). Although the section has been subdivided to understand the influence of each of these contextual determinants on attachment, it will become evident that due to the high incidence of children living in adverse conditions in SA, socio-economic deprivation, trauma and maternal deprivation are often interlinked. The literature available on attachment in children in Africa and in SA is limited and has focused on vulnerable children or children from high risk environments, thus allowing room for further dialogue.

3.1 Attachment and Culture

According to Bowlby, attachment theory applies universally to children as it is based on an ethological approach to research (1969/1982; 1957/1979; 1980). Ethology is the rigorous scientific study of animal behaviour, and purports that all mammals exhibit certain inherited patterns of behaviour (1957/1979). Thus observed, and therefore empirically verifiable, behaviour is studied. Bowlby was deeply influenced by Darwin's evolutionary theory, and understood that without a powerful instinct to forge an attachment between a helpless, utterly dependent infant and his/her primary caregiver, our species would not survive. Most profoundly, attachment guards against malnutrition (True, 1994). Infant behaviours, such as smiling at the mother, are aimed at "leaving mothers spellbound and enslaved" (p.37).

Ainsworth provided early verification for the cross-cultural applicability of attachment theory by studying attachment behaviours in a sample of Ugandan mothers and their infants (Ainsworth, 1967). Approximately two-thirds of the Western and non-Western population are reported to have a secure attachment (Peterson, 2004). Minde et al. reported that by 2006, over 3 000 attachment assessments of nonclinical children from 20 countries had been reported in the literature. Although most attachment research is conducted in the Western world (Minde et al., 2006), 89% of infants born every year live in non-Western countries (The World Population Bureau, 2014).

According to the South African Survey for the period 2013 to 2014 released by the SA Institute of Race Relations (2014/2015), 972 858 births were recorded in 2012 and 1 209 600 births were estimated for the current period. 18.6 million children live in SA (Children's Institute – University of Cape Town, 2015). Despite this, "the current cross-cultural database [on attachment studies] is almost absurdly small" (van Ijzendoorn & Sagi-Schwartz, 2008, p.901). The figures included highlight the need for more research exploring attachment in clinical and non-clinical samples, and within non-Western contexts.

In the literature, the West is considered to comprise Canada, North America, Northern and Western Europe, Australia and New Zealand (van Ijzendoorn & Sagi-Schwartz, 2008). Thus Africa, and SA, is considered non-Western. However, the positioning of SA as Western versus non-Western is not without complications given both our political history, which saw the country itself segregated into Western versus non-Western communities, and the contemporary effects of globalization on SA society. However, as the attachment literature is dichotomized into Western versus non-Western studies, this research falls in line with this practice while being mindful of the potential limitations due to our multi-cultural heritage.

Researchers (Mesman et al., 2016; van Ijzendoorn & Sagi-Schwartz, 1999, 2008) have interrogated the attachment literature to describe mother-infant attachment patterns across cultures, and found universal support for the occurrence of secure, avoidant and resistant-ambivalent types. Prevalence rates from attachment studies conducted in Africa (four samples), China (one sample), Israel (three samples), Japan (three samples), Indonesia (one sample), the United States (21 samples) and Western Europe (nine samples) were compared. The African cohort included samples from Uganda, SA, Kenya and Mali. In all the societies studied, approximately two-thirds of children were rated as securely attached (although the range varied from 56% to 80%).

This is in keeping with Ainsworth and colleagues' estimation that approximately 70% of children from nonclinical samples are securely attached and 30% are insecurely attached (Ainsworth et al., 1978). The lowest and highest frequencies for security were from Israel - the lowest from communal kibbutzim and the highest from family-based kibbutzim (van Ijzendoorn & Sagi-Schwartz, 2008). Half of the studies reported frequency rates for security at 60%. Generally, prevalence rates for secure and insecure classifications for Western Europe and the United States were very similar i.e. 66% versus 67% for secure attachment, 28% versus 21% for avoidant attachment, and 6% versus 12% for resistant-ambivalent attachment (van Ijzendoorn & Sagi-Schwartz, 2008).

However, the rates for avoidance and ambivalence showed more sensitivity to context (Peterson, 2004; van Ijzendoorn et al., 1999; van Ijzendoorn & Sagi-Schwartz, 2008) than originally suggested (Ainsworth et al., 1978). Avoidant attachment ranged between 0% for the Dogon from Mali and family-based kibbutzim, and 28% for Western Europe, although most countries reported avoidant rates below 10% (van Ijzendoorn & Sagi-Schwartz, 2008). An earlier study (van Ijzendoorn et al., 1999) reported 20% avoidance in Western societies and 8% in non-Western societies, implying that avoidance is more prevalent in Western societies. Resistant ambivalent rates showed the most variation across contexts, ranging between 6% for Western Europe and 37% for communal kibbutzim (van Ijzendoorn & Sagi-Schwartz, 2008), or between 10% in Western and 18% in non-Western societies (van Ijzendoorn et al., 1999). Collectivist cultures generally report higher rates of resistant-ambivalent attachments (Pearce, 2009). When looking specifically at the four African samples, avoidance rates were lower (between 0% and 18%) while security (between 57% and 72%) and resistance ambivalence (between 8% and 25%) showed more variability when compared to Western societies (van Ijzendoorn & Sagi-Schwartz, 2008).

The incidence of disorganized attachment is notably absent from these comparisons and might be reflected in the use of an 'other' attachment classification reflected in four of the societies studied (three were below 10% and the Dogon had 23% (van Ijzendoorn & Sagi-Schwartz, 2008). According to Pearce (2009), disorganized attachment is rare, accounting for merely 5% to 10% of attachment classifications in North America. However, an earlier study by van Ijzendoorn and colleagues (1999) interrogated 80 attachment studies conducted globally to date and reported the prevalence of disorganization as 17% in Western societies (1 412 parent-child dyads were studied) and as 21% in non-Western societies (198 dyads were studied). Thus, while the incidence of security seems to be consistent across contexts, the distribution of insecure attachment categories varies. Whilst studies from Africa were included in this meta-analysis, the bulk of the studies came from North American and European societies.

Contemporary researchers have supported the universality of attachment but challenge the applicability of how attachment behaviours may be interpreted across cultures, given the influence of contextual determinants (Mageo, 2013; van Ijzendoorn & Sagi, 1999; van Ijzendoorn & Sagi-Schwartz, 2008). Adaptation to context - and therefore variation in behaviour - is necessary to provide a species with the best chance of survival (Darwin, 1859/1985). The human baby is born prematurely to allow for cultural adaptation to its unique environment (Gerhardt, 2015). Thus, it is believed that cultural refinements to attachment theory will add to its richness rather than forfeit its value.

Opening the door to human diversity could greatly enrich the understanding of the myriad of ways in which human relationships take shape, go awry, and undergo repair in social contexts around the world. Expanding the research in this way may, in fact, reveal what an intellectual treasure chest attachment theory really is. (Mageo, 2013, p.241)

However, a point of contention for Mageo (2013) is that the basic tenets of attachment theory have been reified and therefore not questioned, despite decades of attachment research. The tenets underlying attachment theory are: a) felt security is favoured over autonomous behaviour, and b) security is measured by the balance demonstrated between proximity seeking versus exploratory behaviours. For Mageo, attachment theory cannot advance unless we "privilege human variations over human universals "(p.243).

van Ijzendoorn and Sagi-Schwartz's (2008) review of attachment research reported the following commonly held assumptions in Western studies: a) attachment is universal; b) two-thirds of any population will report an incidence of security; c) security is promoted through sensitive responsiveness to attachment signals; and d) security is indicated by competence in the regulation of negative emotions. However, the data available to test the normativity (four samples), sensitivity (four samples) and competence (one sample) hypotheses in African studies is limited. Thus, the

authors state that more research in non-Western societies is needed to test these hypotheses, such as the relationship between security and competence in emotional regulation.

While the body of published South African literature on attachment is small, studies have validated the categorization of attachment in the South African context but recommend the accommodation of cultural influences in interpreting attachment behaviours (Minde et al., 2006) alongside the understanding that context influences the prevalence of attachment styles (Tomlinson et al., 2005; Cooper et al., 2009). Minde, Minde and Vogel (2006) administered the Working Model of the Child Interview (WMCI) (Zeanah, Benoit, Barton & Hirshberg, 1996) and Attachment Q-Sort observation method (Waters & Dean, 1985) to 46 mother-toddler dyads living in an extremely socially and economically impoverished township in Johannesburg, SA. At the time of testing, the unemployment rate for the township was 60%. Following the modification of the scoring criteria of the WMCI to accommodate cultural factors, secure ratings increased from 31% to 58% which is close to the universal trend of two-thirds (van Ijzendoorn & Sagi-Schwartz, 2008).

The following cultural factors that would normally negatively influence verbal representations of attachment in Western samples were not negatively evaluated: a) pregnancies are hidden to protect against possible bewitchment (participants are asked about their pregnancy); b) the child's name is not chosen by the mother but by paternal relatives which can result in disappointment for the mother (participants are asked how they feel about their child's name); and c) communal, not individual, characteristics are valued in children until the age of seven (participants are asked to describe their child's individual characteristics) (Minde et al., 2006).

Of interest, the Attachment Q-Sort ratings for security correlated significantly with the ratings of the modified WMCI. The researchers concluded "that verbal representations of attachment patterns are more influenced by cultural traditions than actual parent-child interactions" (Minde et al., 2006, p.544). The importance, nuances and debates involved in accommodating cultural influences when interpreting attachment behavior in the South African context is being investigated by Bain and

colleagues (Bain, 2016; Baradon & Bain, 2016; Dawson, Bain & Mesman, 2018). However, the intricacies involved when considering attachment in context are multiple.

In a radical departure from the Western conceptualization of coherence of self across contexts as an indicator of attachment security, Morelli and Rothbaum (2007) suggest that coherence is determined by *flexibility* across contexts in non-Western societies. More fundamentally, they suggest that attachment can develop along more than one pathway. Whilst this is still a relatively new debate in the literature, it heralds a potential revolution in how we conceptualize attachment. The authors explored attachment relationships and self-regulation in Western versus non-Western or "majority world" (p.509) societies by comparing parent infant/child relationships, and what behaviours are promoted in Western versus non-Western contexts. Driven by self-determination theory and the promotion of autonomy, in Western (primarily USA middle-class) society the tie between attachment and exploration is primary, whereas in most majority world communities the tie between attachment and dependence is primary.

Thus, different needs trigger attachment signals, such as exploration versus proximity. For the authors, this can explain the different prevalence of attachment styles found in individualistic versus community focused societies. For example, the USA has a higher incidence of avoidant attachments (due to the promotion of exploratory behaviours) compared to Japan, which has a higher rate of ambivalent attachments (due to the promotion of dependent behaviours). While the growth of individualism and expression of an authentic Self is promoted in the West, in non-Western societies the collective and "self in-context" (p.501) or "multiple selfways" (p.506) are facilitated. Stated differently, an interdependent cultural pathway rather than an independent cultural pathway to attachment is available (Keller et al., 2004).

In non-Western societies, accommodating the needs of others are valued over the expression of the individual Self. Morelli and Rothbaum (2007) illustrate this priority by referring to the practice in Japanese culture of teaching children what others are thinking and feeling. In African societies

compliance, harmonious relating, and physical proximity is promoted. Physical proximity, achieved through practices such as co-sleeping and co-bathing, encourages dependence, relatedness and heteronomy. These observations suggest that survival, the evolutionary drive behind attachment (Bowlby, 1957/1979), is linked to survival of the other and not only of the self.

For Morelli and Rothbaum (2007) these differences have "profound" (p.519) implications for understanding both how attachment develops, and the relationship between attachment security, self-coherence and self-regulation found in Western contexts. Whilst the stability of internal working models enables autonomy - and therefore consistency of self - across contexts in Western societies, flexibility across contexts enables the experience of coherence in non-Western societies. This theory forces us to question whether the relationship between coherence of self and attachment found in Western societies will be replicated elsewhere.

Moreover, in an individualistic society, regulation of personal emotions is needed to facilitate independence whereas in a community, regulation of interpersonal relationships is needed to preserve harmony and connections (Morelli & Rothbaum, 2007). This has implications for the type of feelings that are responded to; for example, in non-Western communities pre-emptively responding to distress promotes dependence, while in American middle-class families, positive emotions are responded to more.

Controversially, community oriented relationships do not facilitate the realization of the prized individualistic, independent *Self* stressed in psychoanalytic or attachment theories (Fonagy et al., 2007*)*, but rather encourage the experience of *self in relation to others*. Furthermore, if the development of multiple selfways are fostered in non-Western societies, it is possible that children in these contexts will forge multiple vertical (with parental figures) and lateral (such as siblings) attachments. "The situated self is always mindful of the particular persons and settings in which she is embedded" (Morelli & Rothbaum, 2007, p.520).

This suggests that understanding the development of attachment in a non-Western society pivots on understanding the "self in-context". van Ijzendoorn and Sagi-Schwartz (2008) conclude their review of attachment across cultures: "We need a radical change from a dyadic perspective to an attachment network approach" (p.900). Does psychological health revolve around the primary caregiver (usually the mother) as conceptualized in Western theories, or do we need a Copernican revolution to overthrow this thinking? Interestingly for van Ijzendoorn and Sagi-Schwartz, a change in the conceptualization of attachment would apply to both Western and non-Western contexts as children forge multiple attachments (Main & Weston, 1981). Social competence at five years of age has been predicted by the richness of the attachment network, rather than the strength of the primary attachment relationship (van Ijzendoorn & Sagi, 1999). In African societies it is common for children to be raised by a network, or community, of mothers that include grandmothers, carers, aunts, and neighbours (Robinson, 2014). This is most unequivocally communicated by the common practice in African societies to call all older women "mama" and elderly women "gogo".

> In African culture, the sons and daughters of one's aunts and uncles are considered brothers and sisters, not cousins. We do not make the same distinctions among relations practised by Whites. We have no half-brothers or half-sisters. My mother's sister is my mother. (Mandela, 1994, p. 9 cited in Maiello, 2000)

Evocative and poignant explorations of how this African practice makes domestic workers, or carers, receptive to forming attachments to the children in their care have been described (Matthews, 2017; van der Merwe & Gericke, 2009).

According to Kuhn, a governing scientific paradigm is comparable to a lens through which the world is viewed (Chalmers, 2013; Kuhn, 1996). When a new paradigm looms on the horizon, a period of crisis manifests. Alternate paradigms are 'incommensurable' in that they are so different, they cannot be compared. However, for Kuhn shifts in paradigms are not influenced by approximating reality, but rather through the mounting up of anomalies that the governing paradigm cannot explain or problem-solve. In his controversial account, science does not progress towards truth.

Rather than proposing a paradigm shift (as suggested by Fonagy & Campbell, 2015), I would suggest that we compare different viewpoints through the lens of empirical data. To advance our understanding of attachment, it is critically important that we allow for the possibility that attachment may develop along more than one pathway (and perhaps simultaneously across two or more pathways).

3.1.1 Attachment and exposure to trauma in South Africa

South Africa, despite massive policy transformation, remains an impoverished and effectively hostile environment for the majority of its children, especially girls; a situation, which if not addressed, will return to haunt South Africa in years to come. Children growing up under these similar conditions are reported to exhibit a high prevalence of stress-related psychological symptoms, difficulties in cognitive development, lower levels of academic achievement, and higher rates of behavioural and anti-social disorders. (Lockhart & van Niekerk, 2000, p.299)

> Half a million South Africans murdered, children hard-hit.
>
> (Institute of Race Relations, 8th June 2017)

Unfortunately, violence has become endemic to South African society, a society which is reportedly the most violent in the world (Butchart, Nell, & Seedat, 1996; Institute of Race Relations, 8th June 2017). According to the latest South African statistics available on social fabric crimes, 426 512 contact crimes were reported for the period 2016 to 2017 (Institute of Race Relations, 2018). Of these, 19 016 were murders committed, of which 836 were against children under 18. An alarming 24 608 sexual offences against children were reported (39.5% of all reported sexual offences). The tables below indicate the incidences reported for contact crimes against children and in total for the period 2016 to 2017.

Table 3.1: Social Fabric Crimes

Contact crimes (crimes against the person)	**Children**	**Total**
Murder	836	19016
Attempted murder	936	18205
Sexual offences	24 608	62 225
Serious assault	7 587	170 616
Common assault	10 200	156 450

(Institute of Race Relations, 2018)

Table 3.2: Other Contact Crimes

Type of crime	**Overall number**
Robbery with aggravating circumstances	138 233
Common robbery	50 666

(Crime stats SA, 2018)

Children exposed to continuous violence are at a higher risk of developing social, behavioural and/or health problems, psychopathology (such as post-traumatic stress, anxiety, depression, personality pathology and substance abuse), suicidality (Lockhart & van Niekerk, 2000), developmental delays (Terr, 2003) or aggression in response to conflict (Blumenthal, 2000; Ensink, Robertson, Zissis & Leger, 1997).

Community violence negatively impacts on peer socialization by undermining the ability to integrate and regulate emotions (Schwartz & Proctor, 2000). Over 70% of child participants from a high-violence community in the Western Cape had been directly exposed to violence, most of which occurred in the community as opposed to the home or the school. Children who are victims of community violence are found to be socially maladjusted (as indicated by aggressive peer interactions, bullying by peers and social rejection), as well as impaired in their capacity to regulate emotions, which further undermines the socialization process.

Children naturally turn to their parents for their fears to be reassured and contained. What occurs in a society riddled with crime and violence, and how does it impact on attachment security? According to the basic Western tenet of attachment theory, attachment security is indicated by the balance demonstrated between proximity seeking and exploratory behaviours. However, what happens when the environment is not safe to explore?

The literature debates whether the impact of trauma and deprivation (socio-economic and maternal) on attachment is moderated by personal resilience. Whilst secure attachment is considered as promoting resilience in the face of environmental stress (Blum, 2004; Mikulincer & Shaver, 2016; Sroufe, 2016), others argue that personal resilience is protective of attachment relationships (Dozier & Rutter, 2016). Empirical research is not yet able to explain why some children are less vulnerable to adverse environments than others (Stovall-McClough & Dozier, 2016). It is thought that development in neuroscience and the identification of 'risk genes' might eventually help to explain why some children are more resilient than others. Ainsworth noted that some infants are more adaptive to their environment and able to form a secure attachment to more than one figure which promotes resilience (Blum, 2004). Miller writes that attachment in middle childhood, and the interaction of factors such as resilience, later experiences of loss or trauma and psychopathology on attachment "are as yet little understood" (2010, p.374). According to Sroufe (2016) however, resilience is found in children who have a secure attachment as these children have better developed coping skills and are able to galvanize needed environmental support; thus securely attached children have the resources to bounce back from adverse experiences.

3.2 Attachment and Socio-Economic Deprivation

Our children have borne the brunt of apartheid's ravaging deprivation. Most were robbed of their right to a decent education, adequate health care, stable family lives and sometimes of their entire childhood. (Mandela, Opening of Cape Town's SOS Children's Village, Cape Town, SA, 25 May 1996)

Unfortunately, twenty years after this pronouncement was made by President Mandela (or *Madiba* as he is affectionately called by South African children), many children continue to live in conditions of extreme adversity. According to the most recent available stats, 62.2% of South African children were estimated to live in poverty in 2015 and a staggering 12 081 375 children received the monthly child support grant of only R380 (or $21) in 2017 (Hall & Sambu, 2017b). While this grant was increased this year to R410 (www.sassa.gov.za/index.php/social-grants/child-support-grant), an estimated 12 million children continue to live in poverty (Jamieson, 2014). The table on the following page lists some of the social, economic, and health factors that impact on the quality of care many children receive.

Despite living in a brutally deprived Xhosa township in Cape Town, with high rates of unemployment, violence, and exposure to multiple traumas in childhood (Cluver, Gardner, & Operario, 2009), the normative incidence of security (61.9%) was found amongst 98 mother-infant dyads assessed at 18 months postpartum. Tomlinson and colleagues (2005) suggested that the practice of *Ubuntu* within a community accounts for meeting the normative hypothesis of approximately two-thirds of the secure attachments in the sample (van Ijzendoorn & Sagi-Schwartz, 2008). According to *Ubuntu*, the responsibility of raising a child resides with all community members; as a result, neighbours provide food for mothers and infants when needed.

Table 3.3: Social, economic and health risks*

Children living in poverty as a proportion of all children (Hall & Sambu, 2017b)	62.2%
Children living in child-headed households as a proportion of all children (Hall & Sambu, 2017a)	0.3%
Infant mortality by age one	41 610
Child support grant recipients (2013/14)	11 125 946
Monthly value of the child support grant (October 2014)	R 320
Number of people living in relative poverty (2012	18 777 566
Proportion of people living in relative poverty (2012)	35.9%
Unemployment rate (official definition)	25.5%
Unemployment rate (expanded definition)	35.6%
Household food adequacy (2013)	77%
Severe malnutrition among under-fives (2012)	4.4 per 1 000
Diarrhoea incidence among under-fives (2011)	90.3 per 1 000
TB prevalence rate (2013)	857 per 100 000 people
People HIV-positive (2014)	5.51 million
People on anti-retroviral treatment	1 995 000

* Figures reported are the most current available. (Institute of Race Relations, 2014/2015)

The incidence of security found is very close to the 58% reported by Minde and colleagues' study of another impoverished community in SA (2006). Other attachment ratings were (from highest to lowest), disorganized (25.8%), resistant-ambivalent (8.2%) and avoidant (4.1%) (Tomlinson et. al, 2005). It is also important to note that Tomlinson and colleagues administered the Strange Situation procedure (Ainsworth et al., 1978), which is not dependent on language for attachment representations.

Infant disorganization at 18 months correlated significantly with maternal depression at two months, maternal sensitivity (at two months and 18 months), and maternal frightening or frightened behaviour, although a regression analysis indicated that only maternal frightened / frightening

behaviour at two months predicted infant disorganization at 18 months. The authors conclude that psychosocial stress (HIV/AIDS prevalence, high sexual and physical abuse rates, domestic violence) preoccupy mothers in these dire contexts, and the mothers' anxieties around these issues is experienced as maternal frightened / frightening behaviour by their infants.

The low rates for avoidant attachment were accounted for by contextual and cultural factors which include regular physical proximity. Most mother-infant dyads live in a single bedroomed home which consequently promotes responsiveness to distress, and co-sleeping; and a further influence is the breast feeding of the infant until the age of between one and two years. However, the body of literature available to investigate how cultural practices and socio-economic factors influence the distribution of attachment patterns in SA is small. Whilst Bain and colleagues from 'The Ububele Mother-Baby Home Visiting Programme' have articulated the importance of incorporating indigenous beliefs systems into intervention programs (Bain, Dawson, Esterhuizen, Frost & Pininski, 2016), more research on the applicability of Western attachment measures in non-Western cultures is needed. Recent research has questioned how maternal sensitivity, as an indicator of attachment behaviour, is measured across contexts (Dawson, Bain & Mesman, 2018; Mesman, Minter, Angnged, Cissé, Salali, & Migliano, 2017; Mesman et al., 2015).

Comparison of a Western (Kerns et al., 2006) versus non-Western (Pritchett et al., 2013) cross-sectional and longitudinal study of attachment before and during middle childhood, helps us to consider some of the complexities involved when taking context into account. Pritchett and colleagues (2013) reassessed 40 of the children from the study described in the preceding paragraph in middle-childhood (mean age 10), to evaluate the continued impact of exposure to a high-risk environment on the development of RAD. The story stem technique - Manchester Attachment Story Task (MCAST) - was used. Four story stems with attachment-related themes were introduced to the children, which they completed using props and storytelling. Purposive sampling was used so that

each of the attachment styles would be represented. Between 40% and 50% of the children in each attachment classification were recruited for the follow-up study.

The results of the study were alarming, and force us to question how attachment is understood developmentally, and within a non-Western context. Five of the children (12.5%) were classified with RAD. However, three of the five children obtained a secure attachment classification on the MCAST. In terms of stability of attachment, although the incidence of security increased from 61.9% to 70%, only 49% of the participants obtained the same attachment classification as in infancy, and this stability only applied to secure and disorganized attachments. A high incidence of previously insecure attachments converted to secure (41%), of which disorganized was the most likely classification to change (33%).

The study by Pritchett and colleagues is the only other known South African or African study to explore attachment in a sample of middle-age children from a high-risk environment (the studies by Robinson (2013) and Plit (2013) used data from my study). In the Western study, 77 children from a well-resourced context, who had previously been assessed in grade three, were reassessed in grade five (mean age 11) (Kerns et al., 2006). This gauged the children's perceptions of dependence on and availability of attachment figures (Kerns et al., 2001), as well as the children's use of avoidant and preoccupied coping styles (Finnegan, Hodges & Perry, 1996). The results from the study were as follows:

1) Children's perception of parents' availability increased with age.
2) Parents continue to be preferential attachment figures during times of distress (although less so when feeling tired).
3) Approach to attachment figures declines with age as, it was hypothesized, children become more self-reliant (Marvin & Britner, 1999 cited in Kerns et al., 2006). Specifically, greater use of avoidant strategies (with mothers), and less use of preoccupied strategies, were employed.

4) Children who perceived their mother as becoming more available with age showed increased regulation of emotions.

5) Unchanged or decreased dependency on attachment figures had a modest impact on emotional regulation. Children who made less use of previously employed avoidant strategies showed greater emotional regulation, whilst children whose previous use of preoccupied strategies lessened, showed poorer emotional regulation. The greater the decline in use of preoccupied strategies, the greater the effect.

Kerns and colleagues then queried whether, in non-Western societies that favour interdependence, these shifts would occur at all or at a later point. This is a critical question to ask. As mentioned, exploration is primary in the Western attachment context whilst dependency is primary in non-Western attachment contexts (Morelli & Rothbaum, 2007). While the question remains unanswered, it is evident from the studies described above that attachment involves a complex process that is little understood in terms of developmental and contextual influences. Specifically, the relationship between attachment and competence of emotional regulation is not clear.

Globally, the prevalence of insecurity increases substantially when taking socio-economic status into account. In a meta-analysis of 80 attachment studies, for parent-infant dyads from socio-economically disadvantaged backgrounds, attachment security dropped from 53% to 46%, and to 41% where children were 24 months or older (van Ijzendoorn et al., 1999). While the reported incidence of security (53%) in this study is lower than the normative hypothesis of two-thirds security as generally reported in the literature, it is important to note here the fall in security when socio-economic profiles are considered. The distribution amongst the insecure attachment classifications was as follows: avoidance 17%, resistant-ambivalence 15%, and disorganization 21%. Disorganization increased to 25% for children younger than 24 months (and up to 34% when applying Main and Solomon's continuous rating scale), but this percentage lowered considerably to 11% for children older than 24 months.

Thus, the devastating influence of socio-economic hardship on the attachment relationship seems to be greater during the first two years, the time during which it can be argued that the infant is most dependent on the attachment figure. Whilst the incidence of disorganization dropped amongst the older age cohort, the incidence of avoidance (19%) and particularly resistance-ambivalence (29%) increased. However, interventions aimed at improving the attachment relationship have been successfully implemented in socio-economically deprived communities (Bain et al., 2016; Cooper et al., 2009).

3.3 Attachment and Institutional Care

According to Bowlby, children who are denied a consistent attachment figure are at-risk. He introduced his concept of *maternal deprivation* following his extensive studies of children who had experienced severe neglect and been orphaned following World War II in Europe (Gillibrand et al., 2011). His report, compiled for the World Health Organization, has had the most important impact on the development and understanding of contemporary child psychiatry (Rutter, 2010). In SA, almost four million children do not live with either parent and according to the most recent available statistics, approximately 58 000 live in child-headed households due to factors such as HIV/AIDS and parents seeking employment elsewhere (Hall & Sambu, 2017a). SA has the highest number of HIV-positive people globally, estimated to affect 5.1 million people (Institute of Race Relations, 2014/2015). Around 631 000 children have been orphaned by both biological parents (Hall & Sambu, 2017a). Over 440 000 foster grants were paid in 2017b (Hall & Sambu, 2017b), while only 1 699 children were adopted between 2013 and 2014. Many orphaned children live with grandparents or with a family relative (Blackie, 2014).

According to section 151 of the South African Children's Act 38 of 2005, the children's court can place a child in temporary care if it is deemed that s/he is being abused or neglected. "Institutional

care can be broadly defined as an out of home care arrangement for children. It includes small group homes, temporary safe care centres, children's homes, children's villages and boarding schools used primarily for care purposes" (Tolfree, 2003 cited in Kang'ethe & Makuyana, 2015, p.122).

According to the Children's Act, a child is considered "in need of care and protection" (p.63) if the child is abandoned or orphaned; his/her behaviours cannot be managed by caregivers; s/he lives on the streets; is substance-dependent and without support for rehabilitation; is exploited or exposed to exploitation; is being abused or exposed to abusive circumstances (or at risk thereof); is emotionally or physically neglected, or is being maltreated or humiliated by persons who have control over the child.

Experiences of neglect and/or abuse also include home environments where children are exposed to substance abuse and belittlement (Howe, 2005). In addition to this, the circumstances of children involved in child labour or in child-headed households need to be investigated by a social worker for possible placement in institutional care (South African Children's Act 38 of 2005). Children who experience profound deprivation, neglect (including institutionalized care), and/or abuse, experience "that there is no safe psychological place to go at times of fear and distress" (Howe, 2005, p.110).

Given the absence of published research on attachment in institutionalized children in SA, the international literature was reviewed to understand attachment in this cohort of children. While orphaned and institutionalized children are associated with higher levels of insecure attachment (Gillibrand et al., 2011), a review of the literature exposed contradictions regarding the relationship between severe maternal deprivation and attachment impairment.

Firstly, the literature contradicts whether there is a relationship between pathogenic care and severity of attachment disturbance. O'Connor and colleagues (2000) conducted a large scale cross-sectional and longitudinal study of attachment disturbance and early parental deprivation. The sample consisted of early-placed adoptees (58 Romanian and 52 United Kingdom (UK) babies

adopted before six months), later-placed babies (59 Romanian babies adopted between 6 and 24 months) and late-placed toddlers (48 Romanian children adopted between 24 and 42 months). Length of early deprivation was associated with frequency of disinhibited type of attachment disordered behaviours. Children adopted after six months exhibited significantly more severe attachment impairment than early adoptees, although the length of deprivation was not associated with the presence of mild attachment impairment. However, around 70% of the children who had experienced extreme deprivation did not exhibit severe attachment disturbance. The authors conclude that pathogenic care is not a prerequisite for severe attachment disturbance, although inadequate care or multiple caregivers is listed as a criterion in the DSM-V for diagnosing Reactive Attachment Disorder (RAD) and Disinhibited Social Engagement Disorder (APA, 2013).

Zeanah also cautions that maltreatment and neglect do not automatically result in RAD, and that their prevalence in relation to RAD is low (Chaffin et al., 2006). Thus, whether pathogenic care is a prerequisite for RAD is contradicted in the literature. Stated more simply, the direct link between the environment and severe attachment impairment is contradicted. Given that attachment theory foregrounds the direct impact of the environment, this contradiction raises a theoretical challenge.

However, the association between disorganization and maltreatment, or adverse environmental conditions, is consistently supported in the literature (Gillibrand et al., 2011; van Ijzendoorn et al., 1999). Disorganization is acknowledged as a form of profound attachment impairment (Howe, 2005). For disorganized infants or children, their parent's behavior is experienced as frightened and frightening (Main & Hesse, 1990), which creates an impossible bind for the infant and the attachment system is derailed. Consequently, these children do not develop an organized, coherent response to stress, parental separation and reunion, but display incoherent, mistimed, chaotic and odd behaviours (Schechter & Willheim, 2009).

Attachment functioning is also categorized along the lines of organized versus disorganized, with avoidance and ambivalence indicative of the latter (Schechter & Willheim, 2009). Some of the

prevalence rates for disorganization in response to specific environmental stressors are (from highest to lowest): child maltreatment (48%), drugs and alcohol (43%) and maternal depression (21%) (van Ijzendoorn et al.,1999). Conversely, the prevalence of security is very low (from lowest to highest): child maltreatment (9%), drugs and alcohol (26%), and maternal depression (41%).

From these reports, it is evident that child maltreatment, and drug and alcohol abuse / dependence both have a devastating impact on the attachment relationship; thus, the need for placement. The prevalence rates for avoidance in these samples was as follows: child maltreatment (28%), maternal depression (21%) and drugs and alcohol (15%). The incidences of resistance-ambivalence in the samples was not high, and was reported as follows (from highest to lowest): maternal depression (17%), drugs and alcohol (16%) and child maltreatment (15%). Overall, security was low (33%) and the incidence rates of disorganization (30%) and avoidance (25%) high, whilst resistance-ambivalence (13%) was within the normal range.

Alarmingly, incidence rates for disorganization are very high in maltreated infants (80%) (Carlson, Cicchetti, Barnett, & Braunwald, 1989). Two-thirds of institutionalized, non-Western, 15-month old Greek infants and 24-month old Romanian toddlers were classified as disorganized (Van London, Juffer, & van Ijzendoorn, 2007). However, 36% of the infants adopted from institutional care by six months of age were classified as disorganized. Although the normative distribution hypothesis of approximately two-thirds for security was met (at 61%), Van London and colleagues conclude that deprivation increases the risk of disorganization, and earlier placed adoption - preferably by age one - protects against disorganization.

Secondly, the placement of children in institutional care is a controversial topic, as some view it as exposing children to “extreme environmental deprivation” undermining attachment security (Sheridan, Fox, Zeanah, McLaughlin, & Nelson, 2012, p.12927; Zeanah & Smyke, 2008). The circumstances associated with necessitating placement (often involving maltreatment and changes in caregivers), the process of being placed (i.e. welfare investigations, court appearances and

uncertainty about the future), and the conditions associated with living in a children's home (i.e. multiple and rotating caregivers with high staff to children ratios), are thought to promote the establishment of a disorganized state of mind (Van Ijzendoorn et al., 1999). Research has shown that the growth of cortical grey matter and white matter volume diminish in response to institutionalization (Sheridan et al., 2012). However, the study by O'Connor and colleagues (2000) did not find that institutionalization impacted on attachment disturbance.

Whilst many of the children in my sample had experienced an unstable early childhood that included placement in institutional care at the time of testing, none had been raised in institutional care from birth. Literature reporting attachment patterns in this older and fluid cohort was investigated. However, most literature has explored the effect of early placement and later adoption on attachment; and to a lesser degree, the psychological sequelae of institutional care on adolescent functioning. The impact of temporary institutional care on the attachment system of children placed during middle childhood has received very little attention. A study in Italy on attachment representations in middle-age children (9 to 13 years of age) placed in temporary institutional care (for a duration of between 8 and 14 months) showed significantly higher incidences of insecure and disorganized attachment styles than their never institutionalized counterparts (Zaccagnino, Cussino, Preziosa, Veglia & Carassa, 2015). Similar to the findings of Zeanah and colleagues (Zeanah, Smyke, Koga, & Carlson, 2005), insecurity in institutionalized children was staggeringly high at 91.3%, with most of the insecure attachments classified as avoidant (82.6%); and alarmingly, security was significantly low at 8.7% (compared to 62.9% in the control group). Of further interest, none of the institutionalized children were classified as pre-occupied (compared to 8.6% of the never-institutionalized children), but 8.7% were classified as disorganized.

The authors question whether pre-occupied attachment is less common in middle childhood. The figure for disorganization is much lower than the 66% to 80% reported amongst institutionalized

children (Bakermans-Kranenburg & Van Ijzendoorn, 2009b; Zeanah & Smyke, 2008), and is associated with behavioural and social problems in middle childhood (Zeanah & Smyke, 2008).

The attachment of children who were placed early and remained in institutional care for long were the most impaired. Early and /or prolonged institutionalization is linked to poor capacity to regulate emotions (Thapar et al., 2015), although children removed from institutional settings have shown improvement (Zeanah & Smyke, 2008).

Less commonly discussed in the literature is the employ of insecure attachments as adaptive in the contexts described above. The incidence of insecurity in maltreated children ranges between 70% and 100%, with a tendency to become anxious-avoidant over time (Cicchetti, 1987). According to Crowell and Treboux (1995), avoidance is used by infants as a way to distance themselves from their caregiver's stress, and therefore fulfills an adaptive function. Potential fluidity in the attachment pattern amongst toddlers of emotionally unavailable mothers was also noted by Egeland and Sroufe (1981 cited in Cicchetti, 1987). These studies suggest fluidity in the attachment functioning of children experiencing severe maternal deprivation. Resistant-ambivalent attachment behaviours, such as clinging to the mother or aggression directed towards her, are similarly conceptualized as adaptive in the context of a mother who is otherwise not attentive and responsive to her child's needs (Cassidy & Berlin, 1994 cited in Pearce, 2009).

Interesting cultural differences on the impact of institutionalization were noted by O'Connor and colleagues (2000). Mild attachment disturbance was associated with behavioural disturbance in the Romanian orphans but not in the UK orphans. Perhaps even more noteworthy was the finding that non-Western children were readily identified as willing to go off with a stranger, whilst none of the Western children were. The authors however fail to reflect on the possible cultural implications of this for understanding attachment, rather suggesting the need to further clarify which behaviours are indicative of attachment disturbance.

3.4 Attachment in an Outpatient Sample from Middle Childhood

Whilst numerous attachment studies have been conducted, particularly in schools, the research on attachment in children during middle childhood attending an outpatient clinic is particularly sparse (Shechtman & Dvir, 2006). Shechtman and Dvir investigated this population in a cohort of 77 preadolescents (36 girls and 41 boys) making use of counselling services in Israel. Attachment styles were distributed as follows: 46.8% secure and 53.2% insecure (31.2% preoccupied and 22% avoidant). It is worth noting that the incidence of security is lower than the universal norm of two-thirds securely attached.

As studies in outpatient samples from middle childhood are strikingly scarce, it is helpful to explore the relationship between attachment styles and behavioural problems reported by teachers during middle childhood. It is anticipated that some of these children may be candidates for referral to an outpatient facility. In a study of 108 children in middle childhood, behavioural problems correlated significantly with disorganized –controlling attachments (15% of the sample was classified with a disorganized attachment) (Mossa, Bureaub, Béliveauc, Zdebika, & Lépine, 2009).

3.5 Conclusion

Research on attachment, and particularly on institutionalized children, is very limited in SA. The literature indicates that much more research is needed to understand attachment, both developmentally and in-context, as well as the complicated interplay between them. While Bowlby focused on the environment created by the primary caregiver as determining attachment security, the attachment literature suggests that we need to widen our lens to include the broader environment or context within which the mother-child dyad is being held.

This chapter has outlined some of the critical contributors to felt security, namely: socio-economic deprivation, institutionalized care and exposure to trauma. When conceptualizing attachment

through a cultural lens, the literature questions whether the relationship between attachment and self-development, and attachment and affect regulation, as observed in Western samples, will be repeated in non-Western communities.

This research will also add to the limited body of cross-cultural attachment studies by exploring the questions raised by van Ijzendoorn and Sagi-Schwartz (2008), namely:

a) how is attachment distributed in a non-Western, South African sample of socio-economically and/or maternally deprived children in middle childhood?
b) what is the relationship between attachment patterns and emotionality?

Chapter Four: Meeting and Departure between Attachment and Psychoanalytic Theory

Terms and acronyms: Chapter Four

AAPQ - Adult Attachment Prototype Questionnaire

AQR – Affective Quality of Representations

BORRTI - Bell Object Relations and Reality Testing Inventory

CRP – Complexity of Representation of People

EECR-R - Experiences in Close Relationships Questionnaire-Revised

EIR – Emotional Investment in Relationships

EMAI – Experience and Management of Aggressive Impulses

GLM - General Linear Models

IWM - Internal Working Model

ORI - Blatt's Object Relations Inventory

PTSD - Post-Traumatic Stress Disorder

QOR - Quality of Object Relations Scale

RAQ - Reciprocal Attachment Questionnaire

RQ - Relationship Questionnaire

SCORS - The Social Cognition and Object Relations Scale

SCORS-G - Social Cognition and Object Relations Scale – Revised G

SEM - Structural Equation Models

SE – Self-esteem

This chapter aims to investigate certain of the theoretical comparisons more thoroughly by considering several key points of convergence and divergence as debated in the literature. The three main bodies of literature informing this review are attachment, psychoanalytic and psychoanalytic attachment theory. The impetus within psychoanalytic attachment theory has been to seek reconciliation between the attachment and psychoanalytic paradigms to end the longstanding feud between these schools. Nevertheless Fonagy, an influential voice who has been at the forefront of this drive and has published prolifically in its support (Fonagy, 1993, 1999, 1999b, 2001, 2005, 2018; Fonagy & Campbell, 2015; Fonagy, Gergely, Jurist, & Target, 2002; Fonagy, Gergely, & Target, 2007; Fonagy, Luyten, Allison, & Campbell, 2016; Fonagy & Target, 2002, 2007; Fonagy, Target & Gergely, 2006; Fonagy, Steele, Moran, Steele, & Higgitt, 1992; Fonagy et al., 2010), stated recently that we should question our conceptualization of attachment, and the points of alignment and misalignment between he paradigms (Fonagy & Campbell, 2015; Fonagy, 2018) such as the likening of internal working models (IWM) to object relations (Fonagy & Target, 2007).

This chapter will begin by reviewing early psychoanalysis and Bowlby's break with the psychoanalytic community, to better understand why attachment was not simply incorporated into the psychoanalytic school of thought by its founder. As much of the debate in the literature hinges on whether IWMs and object relations are referring to the same psychological construct Fonagy et al., 2016), the conceptual and empirical relationship between these constructs will be vigorously interrogated. Thereafter, attachment will be explored in relation to affect regulation and defense styles.

4.1 Early Psychoanalysis and Bowlby's Break with the Psychoanalytic Community

> Psychoanalysis is ... not concerned with the real world, nor with the child's or the adult's adaptation to the real world ... It is concerned simply and solely with the imaginings of the childish mind, the fantasized pleasures and the dreaded retributions. (Riviere, 1927, p.376 - 377)

Both Bowlby and Winnicott had been in analysis with the above quoted Kleinian analyst, Joan Riviere. Reportedly, when Winnicott mentioned to Riviere his intention to acknowledge the importance of the real mother in his writings, she was so alarmed that she threatened to turn him into a frog (Rodman, 2003). Winnicott's statement here implied that environment is powerful enough to determine an individual's identity, rather than internal instincts as theorized by Kleinian psychoanalysts. Bowlby was concerned with the influence of the environment on infant development (1979), and attachment theory would later position him in opposition to the classical psychoanalytic focus on the internal world of fantasy, conflict and anxieties. Riviere's quote illustrates the classic Kleinian denouncement of the external environment, although post-Kleinian psychoanalysts (Fonagy, 2001) and psychoanalysis in general (Luyten, 2015) have taken the environment more into account. However, the quote serves to illustrate the historical climate in which Bowlby introduced his groundbreaking ideas.

In 1970, Bowlby presented his seminal paper *Self-reliance and some conditions that promote it* (1973/1979). Here he listed four key divergences between attachment theory and object relations theory, namely: a) orally derived object relations are replaced with attachment or IWMs constructed from experience; b) the focus shifts to the environment "which finds no place in traditional theory" (1973, p.114); c) a wider range of mother-infant interactions are emphasized other than just the feeding relationship; and d) the terms *dependence* and *independence* are replaced with *trust, reliance, self-reliance* and *attachment*.

One of the markers of Bowlby's break with the psychoanalytic tradition was his rejection of the term *object* in 1961 (Bowlby, 1979). For Bowlby, object "implies that the relationship is with something inert instead of with another human being who plays an equal or perhaps *dominant* part in determining how the relationship develops" [italics mine] (1979, p.66). Here we can see that from Bowlby's perspective, it is the *real person and who she is in the real world*, and not a perception or internal representation of an object relationship that determines the quality of the relationship.

Although Bowlby did present his work to contemporary psychoanalytic thinkers, it did not receive much acknowledgement from them (Rodman, 2003). In a letter to Winnicott in 1957 concerning Bowlby's work, Anna Freud wrote:

> … he sacrifices most of the gains of the analytic theory, such as the libido theory, the principles of mental functioning (the pleasure principle), ego-psychology etc. with very little return. I suppose he is put off by the ante-dating of complex mental events in the Kleinian psychology, but that is no real excuse for going too far in the other direction. (cited in Rodman, 2003, p.241)

Psychoanalysts "do not deal with the happenings in the external world as such but with their repercussions in the mind, i.e., with the form in which they are registered by the child" (Freud, 1960, p.54). Anna Freud's tone clearly reflects the general opposition to Bowlby's ideas at the time.

However, during World War II many children were moved to the English countryside away from their parents in London (London being considered unsafe due to wartime bombing, or the 'Blitz'), and Anna Freud revised her own position, recognizing the influence of the environment on infant development. She and Burlingham (1942, 1944) observed how these children were worse off psychologically than those who had remained with their parents in London, despite the bombing. Thus, they shifted the focus away from the Kleinian preoccupation with the internal world to an acknowledgement of the importance of the environment.

While the likes of Anna Freud, Winnicott and Bion revised their positions to accommodate the influence of the environment, it is attachment theory that has most dramatically and clearly shifted

the focus from the internal to the external world. Winnicott would later state that "the inherited potential of an infant cannot become an infant unless linked to maternal care" (Winnicott, 1965/1990, p.43). In other words, "there is no such thing as an infant" (p.39) without maternal devotion, that is, without the external world. His emphasis on the development of the self under correct environmental conditions was taken up by various contemporary schools, such as Self Psychology (see Kohut, 1992).

For Bion, the health of the infant is dependent on the real mother's capacity to receive, tolerate and modify her infant's projections (O'Shaughnessy, 1988); although an infant's inherent disposition to hatred and envy of the breast - that is felt to have what s/he needs - can block the infant's capacity to receive nurturance from the mother (Britton, 1992).

Bowlby, Winnicott and Bion were contemporaries who were aware of each other's work. While Winnicott (1960) and Bion (1963) were also influenced by Klein's description of an internal world that is projected, discovered, navigated, and enacted in relation to the mother to discover a sense of self (Mitchell, 1991; Segal, 1978), Bowlby was steadfast in his focus on real life events - or the role of the real mother - on infant development, and never deviated from this position (Rodriquez, 2015).

4.2 Attachment States of Mind versus Object Representations

The theoretical divergences and convergences (Fonagy, 1999b, 2018) between attachment theory and object relations theory are widely debated in the literature. Here, object relations theory must be defined before it can be examined in association with attachment theory, and specifically with IWMs.

4.2.1 Object relations

The unique, central, and unitary claim of object relations theorists is that optimal development and individuation is predicated upon an optimal early human relationship. (Klein & Tribich, 1981, p.30)

Importantly for this discussion, these relationships or interactions between people can be "internal or external, fantasied or real" (Cashdan, 1988, p3). However, there is no single definition of object relations theory since different theories focus on its different aspects, such as defenses, personality structures (such as narcissism), and development. Thus, according to Cashdan it is necessary to investigate the different object relations theories to describe the commonality between them. Object relation theorists include Margaret Mahler, Otto Kernberg, W. R. D. Fairbairn, Heinz Kohut, Melanie Klein, Wilfred R. Bion and Donald Winnicott. However, this grouping is contentious and shifting with profound differences between theorists, particularly regarding the relationship between the internal world and the environment. As Bowlby engaged in theoretical dialogue with Klein, Winnicott and Bion (1979), their theories will primarily, but not exclusively, be used as examples to explore the meaning of object relations theory.

According to object relations theory, internal objects are forged to a greater or lesser degree by internal factors that include constitution (such as Klein's constitutional envy, greed and aggression), the life and death instinct, innate developmental tendencies such as the pre-oedipal and oedipal complex, levels of aggression, an innate idea of self, the unconscious, an internal capacity to tolerate pain, and a goodness (gratifying) / badness (frustrating) split. The psychological importance of the oral stage of development, or the feeding relationship, is emphasized in object relations theory (Bowlby, 1979). These internal factors or dynamics interact with the external world through projective mechanisms to influence how object relations are represented internally or imaginatively constructed (Bion, 2005).

The internal world is populated with human relationships and is *representational* (Cashdan, 1988); and when forming object relations, there is a complex interplay between the internal and external worlds, or between the internal and external mother (Klein, 1945). Furthermore, object relations theories attempt to clarify the interpersonal occurrences during the pre-oedipal period (Cashdan, 1988). For Winnicott, when a baby experiences too many environmental failures, or when impingements are premature, the baby develops a theory to explain the failure, such as 'I am a greedy baby', or' I do not exist.' This theory is used to inform the development of internal object relations, including the internal representation of the mother-infant relationship. The theory the baby develops can potentially follow several different routes, as illustrated by the array of psychoanalytic theories developed to explain experiences and responses to psychological distress.

Internal factors also help to explain why, in response to similar environmental failures, one baby will develop one set of symptoms, and another baby a different set of symptoms. For example, in Guntrip's theory of the schizoid state, the ravenously hungry baby whose needs have been severely neglected retreats into an intellectual, rationalising self, out of fear of greedily devouring and destroying the love object (Guntrip, 1969).

For Winnicott, when the mother fails to provide an environment that can both make sense of her infant's protests, and reliably translate preverbal, sensate, visceral experiences into meaningful experiences through empathic understanding (Winnicott, 1965/1990; 1975/1992), the infant constructs a False Self to comply with and accommodate the mother's needs, and defend against annihilatory anxiety (1965/1990).

In Kohut's theory, if the mother does not respond empathically and accurately to her child's self-object needs, development of the Self is arrested (1975/1992).

In Kleinian theory, the hungry infant phantasises an object, such as a breast that can satisfy that hunger (Segal, 1978). Phantasy is the mental or psychic representation of biological instincts. The

instinct is psychically expressed through its translation into a phantasy, which then allows for an appropriate object to satisfy that instinct. In phantasy, the infant ferociously attacks the mother who is perceived to be the container of all good and bad things (Klein, 1952/1984). This attack is described by Klein as "a vampire-like sucking" and "scooping out the breast" (p.69). However, the infant then fears retaliation for this attack, raising persecutory anxiety in the child. The perception of the mother as a good or bad object is distorted by the projection of primitive anxieties. The experienced object is introjected as a real and concrete object that then populates the internal world (Klein, 1935).

In the Dead Mother Complex, the infant experiences a mother who is emotionally cold or dead, but instead of acknowledging the pain, acts as though the object is good, exciting and meets all of his/her needs while the infant dies psychically (Green, 1986).

Healthy object relations are said to form when the baby is capable of tolerating pain (Bion, 1967); has manageable levels of anxiety, and destructive impulses (such as aggression, envy, greed etc.) that are overcome by love (Lemma, 1993); and can work through projections to relate to and make use of the mother as a real external object (explored further below) (Winnicott, 1968/ 1989). In this way, with object relations theories, inferences are made about "what goes on inside the infant" (Ainsworth, 1969, p.979).

An object relation is an internal representation or mapping of early relationships experienced through projective mechanisms and influenced by constitutional tendencies, anxieties, and possibly genetics; and different babies develop different theories to represent their experiences. According to psychoanalytic theories, the representation of the object relationship is not merely a reflection of the real relationship in the world, given the influence of internal anxieties and constitution on: a) perception of the object; and b) the theory that the infant develops to explain his experience of the *other* or the environment. In terms of the symptoms - or pathology - that an infant or child develops, each set of responses is unique and dependent on the interplay between the type of

environmental failure and internal factors. In this way, an array of object relations are possible to explain individual responses that can perhaps not be captured by a classification of secure or insecure attachment.

4.2.2 Interrogating a conceptual relationship between attachment and object relations

Ainsworth (1969), Holmes (1997, 2001), Kumin (1997), Leon (1984), Litt (1986), Sandler (2003) and Sorensen (2005) are among those who have attempted to elaborate on the conceptual relationship between attachment – specifically – IWMs, and object relations. These debates, together with empirical research that investigates the relationship between these variables (such as Pinto, Torres, Verissimo, Maia & Santos, 2011; Al-Thani, & Semmar, 2013; Calabrese, Farber, & Westen, 2005; Goodman, 2004; Detrixhe, 2011; Fonagy, Target, & Gergely, 2000; Lukowitsky & Pincus, 2011; Martinez, 2006; Ortigo, Westen, DeFife, & Bradley, 2013; Priel & Besser, 2001; Fishler, Sperling, & Carr, 1990; Stein, Siefert, Stewart, & Hilsenroth, 2011; Zvelc, 2010), will be explored below by examining: a) similarities between attachment theory and object relations theory; b) points of departure between attachment theory and object relations theory; c) and empirical studies.

4.2.2.1 *Similarities between attachment theory and object relations theory*

Two similarities between object relations and attachment theory are: a) the centrality of the mother; and b) the importance given to early relationships to populate the internal world. These both establish templates for later relationships (Ainsworth, 1969; Charuvastra & Cloitre, 2008; Levy et al., 1998). While Bowlby has been criticized for neglecting the internal world "and internalized object relations as major structural organizers of psychic reality" (Kernberg, 1976, p.121 cited in Fonagy, 1999), this criticism is felt to be unfair by Fonagy, as according to attachment theory, the infant has a complex internal world that is structured by IWMs (Ainsworth, 1969; Beebe & Lachmann, 2002). The implication here is that the IWMs that populate the internal world in attachment theory are

comparable to object relations that populate the internal world in object relations theory. Further to this, for Fonagy:

> Attachment theory has its psychoanalytic roots in the work of British analysts from the Independent School. … This is explicit in Bowlby's acknowledgments of these analysts, even though he felt he moved beyond them by establishing a firm biological and evolutionary basis for object relations theory. (2001, p. 96)

The opinion expressed here is that attachment theory provides an evolutionary base for object relations theory. Object relation theorists identified the need for a good external object, while for Fonagy and proponents of an integrated approach, attachment theory seems to have most clearly operationalized what this relationship looks like in the external world. The integration of attachment and object relations is seen in the development of the Bell Object Relations and Reality Testing Inventory (BORRTI) (Bell, 1995) and the Attachment and Object Relations Inventory.

> In keeping with an object relations view, we should point out that how one attaches, either as an infant or an adult, is directly influenced in early infancy by the quality of early object introjects, most importantly the primary caregiver(s). … Thus, attachment relations and object relations are inseparable for practical purposes, even though the constructs may be distinguished for theoretical purposes. (Buelow et al., 1996, p. 606)

Predictably, the BORRTI has shown the quality of object relations and attachment to be significantly related (Goldman & Anderson, 2007). The integration of or overlap between psychoanalytic and attachment thinking critically revolves around the question of whether attachment relations and object relations are indeed “inseparable” for either practical or theoretical purposes.

In the limited theoretical literature directly addressing the overlap between attachment theory and object relations, the following points of similarity emerge. Both attachment and object relations models: a) provide stable and tenacious structures that are robust against change and therefore continue to influence later relationships (Ainsworth, 1969; Bowlby, 1957/1979); b) are primary or

instinctual (Ainsworth, 1969; Bowlby, 1957/1979); c) are used to inform theoretical formulations of psychopathology (Blatt & Levy, 2003) and therefore have a significant influence on psychological health; and d) are binary, as there is an inherent tension between love and hate in both theories, as well as between the life and death instinct, and between security and insecurity, in object relations and attachment theories respectively (Holmes, 2001).

These points of convergence indicate that attachment and object relations share certain fundamental tenets and both play significant roles in the quality of psychological health and wellbeing. However, the literature has not interrogated the eqivalance of IWMs and object relations as structural organizers of the internal world.

Development is conceptualized in psychoanalytic theory as strongly influenced by instincts. In contrast, attachment theory understands development as circumscribed by genetic possibilities. Recent research is pointing to the considerable influence of children's genetic makeup on parents' behavior, referred to as *evocative gene-environment correlations* (Klahr & Burt, 2014; Luyten, 2015*;* Marceau et al., 2013). The field of behavioural genetics calls into question the influence of the environment and early adversity on development (Fonagy, 2003), although the field of epigenetics suggests an interaction between the environment and genes, where the specific environment influences which genes are expressed, and certain genes influence which environment one is exposed to (Luyten, 2015). This complex interplay between genes and the environment being uncovered in contemporary research (Klahr & Burt, 2014; Luyten, 2015*;* Marceau et al., 2013; Rutter, 2010) is perhaps not contrary to the more traditional psychoanalytic idea of an interaction between the internal and the external environment, where the child's internal world influences how the environment is experienced and conversely, the environment is influenced by how the child interacts with it.

Fonagy (2001) also writes that how a child experiences the environment - rather than merely his/her exposure to it - influences what genes are expressed: "the manner in which environment is

experienced will act as a filter in the expression of genotype into phenotype" (p.6). Thus, researching the link or interaction between environment and biology may finally provide empirical evidence of the exact nature of the relationship between attachment and object relations theory. If the link is confirmed, and the child's perceptions influence attachment security - that is, his/her perceptions of safety in the world - then attachment theory will enter the realm of object relations theory. Theorists have articulated this overlap as the psychoanalytic attachment paradigm.

4.2.2.1.1 *The psychoanalytic attachment paradigm*

Contemporary theorists are bridging the attachment and psychoanalytic paradigms by incorporating the influence of perception on the experience of the attachment figure. For Levy, Blatt and Shaver (1998) experiences of both attachment and object relations are internalized representations that influence how relationships are *perceived, conceptualized and experienced*. This view is shared by Slade and Aber (1992) and Diamond and Blatt (1994). However, these theorists do not explain how IWMs are internalized as mental representations, why they are durable, and by what processes they influence later relationships such as with peers and in marriage (Jacobvitz & George, 1996).

The psychoanalytic attachment theorist Eagle (1995; 1997; 2013) acknowledges the impact of environmental influences on emotional and psychological development (stressed in attachment theory), but questions the influence of temperament, constitution, and fantasies on the infant's perception of the caregiver's behaviour. The ontological assumptions made by Eagle are that the infant: a) does not enter into the world as a blank slate; and b) has some degree of primitive agency or ego capacity from birth with which to interact with the environment (Gericke, 2006). These are both positions not ascribed to by general attachment literature.

Contemporary theorists are also questioning the influence of fantasy (Priel & Besser, 2001) and the death instinct (and therefore aggression, envy, rage, etc.) on the perception of the attachment figure (Holmes, 2001). Goodman cautions that the traditional "attachment perspective on psychological

development . . . sanitizes infantile experience by jettisoning the drives as important instigators of intrapsychic conflict. Conflict is perceived as no longer innate, but rather internalized from the environment. Some of us internalize conflict; others do not" (2002, p. 80). Both Goodman (2004) and Sandler (2003) advocate for attachment to be viewed as a drive theory motivating behaviour, as the infant actively seeks safety and security. In other words, the infant is driven to attach to ensure survival.

Such a reconceptualisation of attachment would allow for a bridge between psychoanalytic and attachment theory. In response to the powerful need for security, phantasies can originate in relation to the attachment object (Sandler, 2003). Thus there can be attachment to the real external object according to the traditional attachment position, and to an internal phantasy object. The child's conscious and unconscious phantasies influence his/her perception of the external object, and therefore the construction of the internal objects (*ibid.*). The phantasies associated with the internal objects influence "the experience of the presence of the object" (p.21). Thus there are two objects, the external object and the phantasy object, and each influences how the other is experienced.

Other authors describe the relationship between IWMs and object relations variously as: a) secure attachment necessitating the incorporation of a good reflective object (Gericke, 2006);
b) attachment as providing the overall framework for relationships (Holmes, 1997); c) attachment as a subset of object relations (Calabrese et. al., 2005); and d) as an intersection between IWMS and object relations (Sorenson, 2005).

Gericke (2006) questions whether the establishment of a secure base involves the internalization of a good reflective object that has the capacity to integrate and regulate behaviour. Thus, she asks whether attachment can be secure if emotions such as contempt, anger, fear, sadness or shame dominate. Given Bowlby's thesis that the infant must negotiate an inherent ambivalence between love and hate (1979), if feelings such as contempt, shame or anger dominate, this ambivalence

cannot be satisfactorily resolved. Following on from this, the author suggests that should a high intensity of negative feelings be experienced, a good object would not be securely available to act as a secure base from which the child can explore the world.

According to Holmes (1997), contemporary attachment theory provides an overall framework in which relationships based on the need for security can be considered. Holmes draws on Stern (1985), Trevarthen (1984), Winnicott (1974) and Klein (1952/1984) to move from the external world to the internal world (1997). Holmes (1997) characterizes attachment as comfort with intimacy and separation, and robustness with autonomy. However, his comments regarding ambivalent, avoidant and disorganized anxieties and fears tend to be generalized. He suggests one of two typical ways people with an insecure attachment will respond to, for example, a break in therapy. Avoidantly attached clients will be dismissive of the break, while ambivalently attached clients "will become highly distressed around any separation and may require special 'babysitting' arrangements from other mental health workers during long breaks" (p.243). Hence while Holmes refers to an internal world, his theory remains largely descriptive and fails to account for the influence of a complex, architecturally layered, unknown internal world and the consequent myriad of ways that this can affect the behaviour of someone with, for example, an ambivalent attachment.

In a similar way to the Kleinian oscillation between paranoid-schizoid (part object) and depressive position (whole object) relating, Holmes suggests that an individual may also oscillate between attachment styles (i.e. secure / avoidant / preoccupied / disorganized) or attachment states of mind (i.e. secure / insecure) (Holmes, 2001.). He compares Klein's good breast and whole object relating to the experience of a secure base (*ibid.*). Through parental attunement (Stern cited in Holmes, 1997), or non-intrusive parental responsiveness in secure attachments, an inner world is discovered (Holmes, 1997) and a stable, coherent sense of self is developed (Stern cited in Holmes, 1997).

Sorenson (2005) cautions against assimilating attachment and object relations theories, stating that we need to rather identify points of intersection between them. Sorenson (2005) bridges modern

Kleinian, Winnicottian and Bionian thought to attachment theory by suggesting that the mother orientates her infant between subjective and objective states of mind. In other words, the attuned mother can anticipate how change will affect her infant, and help to cushion the impact and orientate her infant. This "bridging function" (p.123) is slowly internalized by the infant.

Transition facilitating behaviour is an indication that containment, as explained by Bion, is taking place. Containment is necessary for feelings to be digested (Bion, 1959). Bion's concept of containment (1967) has been suggested as a link between object relations and attachment (Fonagy,1993, 1999b, 2001, 2003; Fonagy, Luyten, Allison & Campbell, 2016; Fonagy & Target, 2007). However, Fonagy and Target have only linked Bion and Bowlby briefly, by comparing the success of Bion's containing alpha function to attachment security, without an explanation of the underlying mechanisms by which these processes are similar. Significantly, Bowlby himself compared the establishment of a secure base to "a role very similar to that described by Winnicott as 'holding' and by Bion as 'containing'" (1988b, p.159). For both Bowlby and Bion, relationships are lived emotional experiences or stated differently, an emotional experience is inconceivable outside of a relationship. Thus, Bion and the projective identification cycle can perhaps help us to consider how the attachment experience can be both realized and firmly internalized by making tolerable the feelings experienced (whether these feelings are instinctual or arise in relation to the attachment figure).

However, Bion's theory furthers the conceptualization of how the infant represents experiences internally, such as the loss of the mother whilst Bowlby describes a consequent disruption to the attachment process and impaired capacity to regulate emotions. According to Bion the infant dies internally or falls into a nothingness where no object can be found (1963). This infant eventually shuts down and no longer has emotional experiences, so that the function of a container becomes irrelevant (1963). This echoes Bowlby's assertion that an infant who detaches following loss, is not able to experience a real feeling (1965), as links or relationships are lived emotional experiences;

which Bion powerfully and cogently brings to the foreground.

While Sorenson provides moving vignettes to illustrate her reconceptualization of these theories, the link between object relations and attachment states of mind are not articulated, although she raises an important mandate: “We are trying to understand how the unconscious of the mother translates itself into attachment transactions of early infancy” (2005, p.131). The suggestion here is that there is no boundary between the experience of the internal and external world in early infancy as the mother’s object relations will influence her availability as an attachment figure.

Fonagy has written prolifically on convergences between attachment and psychoanalytic theories (Fonagy, 1999; 2001, 2018; Fonagy, Luyten, Allison & Campbell, 2016; Fonagy & Target, 2007). He has compared attachment classifications to, amongst others: a) Kleinian descriptions of infant mental states (1999; 2001); b) Bion’s containing alpha function to attachment security (discussed above) (1993; 1999b; 2001; 2003; Fonagy & Target, 2007); c) Winnicott’s conceptualisation of ego relatedness (2001); d) Sandler’s pursuit of a ‘background of safety’ (Fonagy, 1999); and e) object relations in Kernberg’s theory (Fonagy, 1999).

According to Fonagy (1999; 2001), insecure attachment is comparable to Klein’s paranoid-schizoid position, and secure attachment to her depressive position. For Winnicott, the infant is born in a state of “absolute (ego) dependence” (1965/1990, p. 42) on the caregiver and sustained ego-coverage by the mother is a prerequisite for formation of an ego. For Fonagy (2001) “What is described as attachment in Bowlby's (1969) terms … in Winnicott's (1965b) is ego relatedness …”(p.96). Sandler’s pursuit of a ‘background of safety’ (Sandler, 1995) for the infant is also seen as analogous to Bowlby’s search for a secure base (Fonagy, 1999).

Further to this, Sandler and Sandler’s (1978) self and other representations are shaped by affect laden experiences and fantasies, and J. Sandler’s paper (2003) makes allowances for internal and external influences (Fonagy, 1999). Fonagy continues, “Sandler’s model can be seen as an

elaboration of attachment theory from an intrapsychic standpoint" (1999, p.605). Drawing on Kernbergian object relations theory, Fonagy (1999) suggests that attachment relationships are formed as a defense against knowing painful internal relationship representations. Kernberg advocates for affect as binding self and other representations (1985), thereby echoing attachment theory's emphasis on affectional ties. Generally, Fonagy has made the comparisons cited above without an explanation of the underlying mechanisms by which these processes are similar.

More recently Fonagy and Target (2007b) have attempted to further advance an understanding of attachment by suggesting that IWMs be reconceptualized as embodied cognition. They draw on the linguistic work of Fonagy to describe how the preverbal emotional relationship between caregiver and infant is embodied. Fonagy and Target's broad comparisons between attachment and psychoanalytic theory have been questioned (Dunn, 2007; Emde, 2007; Shapiro, 2007). Shapiro (2007) points out that Fonagy and Target's conception of modern psychoanalysis considers neither aggressive and sexual fantasies, nor the need to repress these because of shame or infantile wishes. Furthermore, in their theory, they articulate neither the symbolic representation of sexual and aggressive fantasies in the object relations of older children, nor the importance of individuation (Dunn, 2007). According to Dunn,

> They carefully delineate a theory [*of embodied cognition*] to provide attachment theory and psychoanalysis a common theoretical base consistent with contemporary neuroscience and cognitive psychology. Such a theory would, in Fonagy and Target's view, further a mutually beneficial rapprochement (brackets mine). (2007, p.479)

However, for Dunn this is not achieved, as partiality is given to attachment relationships in mental life and the psychodynamics of mental life are not sufficiently incorporated.

4.2.2.1.2 *Attachment, pre-object relating and capacity to relate*

In the haste to restore blood ties between the attachment and psychoanalytic communities, interrogation of these theories from a developmental perspective, and possible points of

convergence versus divergence, has not received sufficient interrogation. Convergences between Winnicott's holding phase and the attachment relationship are widely accepted in the literature (Fonagy, 2001). Both theories acknowledge the influence of the real mother on the infant's experience, and by extension the importance of attuned, sensitive and responsive mothering. Bowlby likened the establishment of a secure base to "a role very similar to that described by Winnicott as 'holding'" (1988b, p.159). And very importantly, holding precedes object relating (Winnicott, 1964/1987). Thus establishment of an attachment relationship and holding precedes object relating. Both the attachment and holding space is a boundaried space that expands and contracts according to the needs of the mother and baby, aimed to protect the baby's sense of omnipotence. However, the next point of overlap between the theories is only at the point of *felt security* (in attachment theory) when *object use* (in Winnicottian theory) is also achieved (Holmes, 1997). For Winnicott development progresses from holding to handling to object relating and only then to object use. Drawing on Winnicott's theory of object use, Holmes (1997) writes that when parents survive their child's rage without retaliating or becoming overly anxious, secure attachments are fortified and the external object and other selves are discovered. When considering Winnicott's theory of object usage, the comparison between objects and internal working models becomes more complex.

Winnicott maintains (Abram, 2012) that while the real mother is different from the internal object mother, objects need to be used before true self-object differentiation can take place (Ainsworth, 1969) and the external mother discovered. Winnicott describes how the mother must be explored, destroyed and used as an object before she can become a real object. The real mother must survive the baby's primitive ruthlessness to become real to her baby. When the baby rediscovers the external object as separate to her/him and over which s/he has no omnipotent control, it allows for differentiation between self and other. Prior to this, "the object behaves according to magical laws, i.e. it exists when desired, it approaches when approached, it hurts when hurt. Lastly it vanishes when not wanted" (Winnicott, 1951/2001, p.153).

Stated differently, “the object, if it is to be used, must necessarily be real in the sense of being part of shared reality, not a bundle of projections” (Winnicott, 1968/1989, p. 219). In other words, self-other differentiation is not dependent on being able to relate to the object, but rather being able to use the object which comes after object relating (*ibid.*). Object usage here is different to the description of establishing a secure attachment where the mother holds the baby over time, thus limiting impingements on the baby’s sense of omnipotence. In Winnicott’s theory, **prior** to the development of object relationships through relation to the breast, the mother holds the infant, building up the ego through ego management (Winnicott,1964/1987).

It would be wrong to put the instinctual gratification (feeding etc.) or object relationships (the relation to the breast) before the matter of ego organization (i.e. infant ego reinforced by maternal ego) (Winnicott, 1964/1987, p.49).

Bowlby also understands the actual mother’s care of the infant as primary. Both Winnicott (Abram, 2012) and Holmes (1993) allow for an internal mother and an external mother to be discovered through object usage. For Winnicott, the internal mother or object is related to through projective mechanisms. The external mother, once discovered as a separate person outside of the infant’s omnipotent control through object usage, might be comparable to the discriminated attachment figure. Ainsworth describes how the infant comes to conceive the mother as a separate, stable and independent “object” (1969, p.1007) during the phase when the mother is discriminated as the primary attachment figure, at around 18 months of age.

Such a theory suggests, albeit tentatively, that there is an overlap between attachment and intrapsychic development, but only at a specific point in psychological development when the internal and external mothers become one. It is this point of intersection that the proponents of an overlap between psychoanalytic and attachment theory have not sufficiently considered. In classical attachment theory the attachment figure is assumed to be part of a shared external reality. Thus, the infant and child do not have to overcome projections before being able to make use of the real maternal figure although she is only differentiated from around 18 months. The inventory used to

measure object relations in this study, namely the Social Cognition and Object Relations Scale – Global Rating Method (SCORS-G), assesses the extent to which self and other representations are differentiated. This inventory tests for the child's capacity to provide a differentiated representation of others, such as the real mother. Thus if attachment theory and object relations theory do potentially converge around the time of attachment and object differentiation, it is anticipated that greater self-other differentiation will correlate with greater attachment security.

Further to this, Holmes states that clients in psychoanalysis are able to explore their internal and external worlds only through a secure base (1997, 2001). This implies that internal objects cannot be located or known without a secure base. Similarly, for Winnicott object *relating* comes after holding and handling, as the baby needs time to mature through accumulated environmental provision before s/he can relate to objects and do so with any complexity (1957; Rodman, 2003). The transitional object, the first 'not-me' object, is only established by the end of the first year (Gaddini, 1998) and this has been linked to the capacity for object relating (Litt, 1986). Initially the baby has no understanding of what s/he feels and it is through holding that s/he becomes aware of an internal world (Fonagy, 1999; Watts, 2009). The baby internalizes the structure provided by the mother through the repeated experience of being held by the mother. Bowlby emphasized that time spent with the infant and child is critically important, as it is over time that attachment security is internalized (1979). Thus, the maternal figure holds the situation over time.

Thus without good enough environmental provision or a secure attachment, how successfully can objects be related to? Diffculties in relating to objects could explain why an insecure attachment is associated with a disturbed personality (Bowlby, 1961/1979). Pre-object relateness (or the time before the infant is able to relate to objects) has received little exploration in psychoanalytic theory (Gaddini, 1998), and has been partially neglected in attachment research. It seems important to interrogate this aspect both theoretically and empirically.

Overall, this review of the psychoanalytic attachment paradigm suggests that the exact nature of attachment and object relations needs to be deeply understood and articulated before potential common ground between the schools of thought can be identified. The suggestion here is that insufficient theoretical rigor has been applied.

4.2.2.2 *Points of departure between attachment and object relations*

Several leading theorists, who argue for a conceptual relationship between Bowlby's IWMs and the psychoanalytic idea of object relations, do not describe them merely as synonymous (Ainsworth, 1969; Calabrese et al., 2005; Goodman, 2004; Sandler, 2003; Al-Thani & Semmar, 2013). They rather foreground overlaps between the concepts, and then describe the points of departure.

This can convey the impression that the theories are more similar than dissimilar. In this section I will describe the divergences identified by the authors. The departing point between object relations and IWMs for Ainsworth (1969) and Bowlby (1957/1979) are ontological and ethological. Attachment systems are formulated to be species-characteristic behavioural systems that ensure physical proximity between mother and child i.e. "bind child to mother and mother to child" (Ainsworth, 1969, p.999), thereby optimizing the chances of survival given the infant's extreme and prolonged period of helplessness and vulnerability. Attachment behaviours (i.e. sucking, smiling, following, crying and clinging) have an evolutionary basis and can be identified in all mammals, as the purpose is to ensure physical survival (Bowlby, 1957/1979). This biological blueprint or instinct to seek an attachment figure to promote evolution and survival is not equivalent to the formation of object relations. Following on from this, the role of anxiety in each paradigm is ontologically incompatible.

The reviewed literature foregrounds various differences, but one which has not been sufficiently attended to is the concept of anxiety. Anxiety is internally driven in object relations theory, and directed towards separation in attachment. Classic psychoanalytic theories focus on how infants

react to internal and external anxieties, and constitutional tendencies (Bion, 1963; 1969; Klein, 1928; 1945; 1952/1984; Mitchell, 1991; Segal, 1978). Defenses are then activated to guard against the impact of these anxieties and conflicts. Conversely, in attachment theory the focus is on maternal sensitivity, and anxiety is understood to be evoked in response to an absent caregiver as survival is then threatened (Bowlby, 1991) rather than being an inherent anxiety.

While separation, reunion and loss are important considerations in both paradigms (Steele & Steele, 1998), psychoanalytic theories are not able to adequately explain why separation from the primary caregiver elicits quite so much anxiety. Attachment story stem measures, such as the Attachment Story Completion Test used in this study, ask children to enact responses to separation and reunion with parental figures, as the consequent anxiety elicited triggers attachment responses.

While both attachment and psychoanalytic theory make use of the term *representation*, it conveys different meanings in attachment theory versus psychoanalytic theory (Botbol, 2010). Attachment moves to the level of representation in middle childhood since the child no longer needs to remain in physical proximity to the caregiver, but draws on representations of the caregiver's anticipated availability when needed to provide comfort to the child (Kerns, 2008). As discussed above, in psychoanalytic theory representations are more complex and subjective, referring to representations of what is unconscious, phantasmatic and affective. Winnicott described the transmission of affective and phantasmatic representations as what the infant sees about himself reflected in his mother's eyes when she is looking at him, which accounts for the subjectivity of the experience (Botbol, 2010; Winnicott, 1967).

In contemporary object relations, representation implies "a reality-oriented image of the object … leaving room for the possibility of the influence of the drives on the 'shape' (or content) of the representation" (Perlow, 1995, p.127). Representations are therefore influenced by processes such as projection. While Bowlby also makes use of the term *projection* (1973), he is referring to the activation of attachment figures or early patterns of care, and not a projection of anxieties and

conflicts that stem from inside. Thus the object is initially representational, and is related to through projective mechanisms; while in attachment theory the attachment figure is initially related to as an external figure who is part of a shared reality, and only moves to the level of representation in middle childhood (Kerns, 2008).

According to Homes (1993), attachment has historically focused on the external, observable and descriptive; while psychoanalytic theories focus on the internal and experiential, namely what cannot be seen. Botbol states that the attachment object is concrete - its availability is dependent on its presence - while in the psychoanalytic approach, a missing object can be hallucinated to fulfill needs (such as hunger) while a present object may be experienced as emotionally absent (Botbol, 2010). Stated differently, in attachment theory the child demonstrates emotional preference for a concrete object, thus *who* the mother is matters, while in psychoanalysis the object is cathected with psychic energy, thus *how* she is represented matters (Leon, 1984).

In attempting to articulate the key difference between attachment theory and object relations theory, several theorists have emphasized how circumscribed the attachment relationship is compared to the broader object world. For Westen, "'Object world' refers to the person's entire ensemble of generalized and specific representations of people" (2002, p.30). Attachment, on the other hand, refers to the most psychologically significant relationships, and therefore an attachment state of mind indicates security felt in relation to the primary attachment figure.

For Fishler, Sperling and Carr (1990), the attachment relationship is present in some relationships but not all, and fulfills three functions: a) to provide comfort; b) to remain in proximity; and c) to be accessible. If these functions are not fulfilled, the child feels threatened and distress is evoked.

Others have described attachment as simply the experience of a relationship, while object relations delve into nuanced descriptions of internal processes, personality structure and functions (Roberts & Roberts, 2007). The difference has perhaps most succinctly been described by the emphasis object

relations theory places on: a) the influence of fantasies on how experiences are internalized; and b) the broader representations of self and other interactions compared to attachment theory's representations of intimate relationships only (Ortigo et al., 2013). Goodman (2004) suggests that IWMs describe interactions between self- and object representations, such as between the mother and child during separations and reunions. The complexity of the self-representation and the object representation informs the quality of the interaction between them.

For Ainsworth, "'attachment' refers to the 'love' component of the relationship, rather than to the relationship as an amalgam of love, anger, and anxiety" (1969, p.1016). Furthermore, attachment is not comparable to dependency and does not refer to affects - which heighten dependency behaviours - or to the qualitative component of object relations, these being the domain of psychoanalysis.

Another critical difference between the models is that object relations theory is a fixation-regression model, whereas attachment theory is a "continuous construction model" (Zeanah et al., 1989, p.657). In other words, in object relations theory it is believed that development needs to progress through certain stages (for example, oral, anal, phallic and genital), and can be arrested at a particular epoch that becomes the root of later pathology experienced. Consequently, opponents of an overlap between the theories question how it is possible for people with varying levels of pathology and adaptive functioning to be grouped together with the same insecure attachment classification (Levine & Tuber, 1993).

Finally, to illustrate key theoretical differences between attachment theory and object relations theory, Bowlby's description of attachment behaviours in reaction to prolonged separations from the mother (1969/1982) and consequent internalization of object relationships in an abandoned infant is considered. Initially the infant searches for the mother and protests vehemently against her absence. After a while his/her interest in finding the mother diminishes and s/he begins to feel sad.

Later, despairingly, the infant withdraws interpersonally, and eventually gives up hope that the mother will return. Eventually the infant detaches.

While Jacobvitz and George (1996) suggest that in adulthood this infant may be very jealous, fearing abandonment by romantic partners, there could be several ways in which the infant responds to real abandonment. The expression of attachment needs is part of a normal (Bowlby, 1973/1979), biologically-driven (Bowlby, 1957/1979) and neurologically-wired process (Gerhardt, 2015). Thus, it is imperative to ask what happens to the infant's attachment needs, and how the baby explains the neglect of his/her attachment needs. In other words, what does the baby do internally with the neglect of his/her attachment needs that enables him/her to survive? This remains unanswered by attachment theory and is perhaps the domain of object relations. While a person can be classified as unattached (i.e. have no attachment) (Zeanah & Boris, 2000), s/he would still have an internal world populated by objects. Accordingly, attachment relationships refer to significant, intimate relationships while object relations encompass a broader representation of interpersonal experiences influenced by perception.

In addition to this, attachment theory assumes the baby will have: a) the tolerance to endure pain; and b) the ego capacity to be able to mourn the loss of the mother. For Sigmund Freud (1917/1987) and Bion (1959) these are not psychological truisms. Although Bowlby was aware of Freud's thesis in *Mourning and Melancholia* in which the capacity to mourn is discussed, and he references this seminal work when referring to the importance of mourning (1960, 1961/1979), in attachment theory he fails to address the conditions under which the baby can successfully mourn. Further to this, for Bion the infant's constitutional capacity to tolerate pain will determine whether the emotions felt are digested and the psychological relationship to the mother maintained (1959, 1967).

While comparisons have been made - such as those by Fonagy (1999; 2001; 2007), Holmes (1993; 1997; 2001), and Sorenson (2005) - their comparisons between theories appear to be superficial,

lacking sufficient critical depth. They seem to align theories that foreground the critical influence of environment with attachment theory too quickly, without further unpacking the layered architecture of these theories' descriptions of the internal world and how this may or may not be in opposition to the basic tenets of attachment theory. Green cautions against comparing interpretations of concepts from one theory with concepts from another theory, creating an *illusion of common ground* (2005). For Green, the only valid comparative process would entail in-depth analysis of sufficient clinical material along with interrogation of the principles underlying the two theoretical positions. However, Lafarge queries whether it is ever possible to compare observations made from outside with observations made from inside (2007).

4.2.3 Empirical studies

Empirical research into the interface between IWMs and object relations are limited (Calabrese et al., 2005), and even more so in children during middle childhood. The relationship between IWMs and object relations is explored in the literature quantitatively through General Linear Models (GLM), Structural Equation Models (SEM), and correlational studies; and qualitatively through thematic content analyses. The GLM and SEM models are used to investigate whether the relationship between the constructs are mediated by extraneous variables. However, comparisons that can be made between studies is constrained because different studies use instruments that operationalize IWMs and object relations differently. This section will begin by describing the findings of a study that administered questionnaires to experts in the field of attachment and object relations to explore conceptual relatedness between the constructs, before investigating whether research suggests that the relationship is indirect or direct.

To assess for conceptual relatedness between the constructs, Goodman administered a 100-item instrument (the Mother-To-Child Object Representation / IWM Q-sort) (Goodman & Moon, 1995) to established experts (identified through extensive publications and national or international reputation) in object relations or attachment theory (2004). The conceptual relatedness between

constructs was significant (r = .90, p < .001) but not identical. Experts had 40% agreement on 10 of the most characteristic items between the constructs, and 60% agreement on the 10 most uncharacteristic items. The experts identified five items that primarily describe a healthy maternal mental representation in a five-year-old from both perspectives, namely: a) emotional availability; b) affect tolerance in self and child; c) positive involvement; d) coherence of representation; and e) flexible authority. Notably, object relation experts focused more on: a) the mother's *image* of the child; and b) the influence of internal and external forces on personality and behaviour; with less emphasis on the mother-child relationship which the attachment experts emphasized. Thus, the most characteristic healthy object relation prototype is a mother who describes her child "as a complex, integrated, emotional being" (p. 608) and the most characteristic healthy IWM prototype is a mother who understands her "child's need for her availability" (p.608). Thus experts distinguished between object relations and attachment as follows: a) general interpersonal functioning versus relationship with the primary attachment figure and b) capacity to relate in a complex and differentiated manner versus anticipated availability of the attachment figure. Goodman concludes that we need to understand the fundamental tenets informing each theory, as there are nuanced differences between the constructs.

The studies reporting a direct relationship between IWMs and object relations are few (Calabrese et. al, 2005). Mikulincer (Mikulincer & Horesh, 1999; Mikulincer, Orbach, & Ivanieli, 1998) describes how avoidantly attached people tend to project blame onto others. Zvelc (2010) reported several significant correlations between all the attachment styles and object relations in 176 undergraduate students. He administered the Relationship Questionnaire (Bartholomew & Horowitz, 1991) and a self-developed Test of Object Relations (Zvelc, 1998). In the study by Wolfaardt and Joyce (2005), attachment (Reciprocal Attachment Questionnaire) (RAQ) (West, Sheldon, & Reiffer, 1987) and object relations (Quality of Object Relations Scale) (QOR) (Azim, Piper, Segal, Nixon, & Duncan, 1991) questionnaires were administered to a clinical sample comprised of 107 adult outpatients who had completed treatment for complicated grief.

The QOR allows for a continuous measure of object relations from primitive to mature (or from lowest to uppermost quality). Patients with QOR scores =< 3.7 were classified with high pathology. The RAQ has five subscales: perceived availability, proximity seeking, separation protest, feared loss and use of attachment figure for support. The RAQ also measures four attachment patterns, namely compulsive self-reliance, compulsive care-giving, compulsive care-seeking and angry withdrawal. Only object relations at the lowest and uppermost ends of the scale were found to correlate significantly with attachment variables. Specifically, as object relations became more primitive there was an increase in feared loss of the attachment figure and angry withdrawal, but also an increase in perceived availability and use of attachment figure.

The direction was reversed for mature object relations (i.e. an increase in maturity was associated with a decrease in feared loss of the attachment figure and angry withdrawal, and a decrease in perceived availability and use of attachment figure). After running post-hoc analyses, the authors conclude that the RAQ is sensitive to detecting maladaptive and disorganized attachments, primitive object relations, and poor attachment patterns in patients with healthier object relations; but caution against the generalizability of the results, given that it is a clinical sample. However, the findings demonstrate how complex this relationship is, i.e. attachment security and quality of object relations only overlap at the extreme ends of the object relations continuum. Thus, even when the limited direct relationships are foregrounded in the literature, the complexity of the relationship between object relations and IWMs nevertheless remain evident in these studies.

Generally, the empirical studies conducted suggest that the relationship between object relations and IWMs are not direct. Attachment is described as the superordinate schema for current interpersonal functioning (Lukowitsky & Pincus, 2011). Lukowitsky and Pincus (2011) found that adult attachments - particularly anxious attachments - mediate the relationship between maternal object representations and current interpersonal adjustment. Priel and Besser (2001), studying attachment styles and object representations in 120 first-time mothers, found that primary maternal

object representations mediate the relationship between IWMs and antenatal attachments to their infants. The suggestion here is that the quality of the maternal object influences how available the mother is as an attachment figure for her infant. Thus mothers with more mature maternal object representations were more likely to bond with their infants.

The maternal representations of secure pregnant women were more complex and differentiated than insecure participants (Priel & Besser; 2001). Further to this, the complexity of representation also differentiated significantly between insecure attachment groups (namely, dismissing, pre-occupied and fearful). Fearful object representations were the most differentiated, while dismissing object representations were the least. The authors conclude: "while conceptualization of attachment behavior and IWMs grasp the early basic patterns of interpersonal relationships and affect regulation, object representations indicate current transformations of these patterns in an individual's internal world" (*ibid.*, p.85). Thus, for the authors, both attachment and object relations theories are valid. Contrary to the findings suggested by Goodman and Moon (1995), the object relations and attachment variables did not load onto a single overarching factor. In other words, they do not form part of the same psychological function. For Detrixhe (2011), IWMs and object relations may be able to 'advance' each other although the implication is unclear as he does not address how this would occur.

A few studies have used thematic content analysis to qualitatively explore attachment styles and object relation themes (Durbach, 2015; Levy et al., 1998; Plitt, 2013). Plitt (2013) used data from my study for a preliminarily exploration of object relations in Attachment Story Completion Test narratives using thematic content analysis, and was co-supervised by the researcher. She identified and described attachment styles and subtypes, namely: a) i) ambivalent attachment; ii) ambivalent attachment with avoidant characteristics; b) i) avoidant attachment; ii) avoidant attachment with ambivalent characteristics; c) i) disorganized attachment - coherent and aggressive subtype; ii) disorganized attachment - chaotic, incoherent, intermittent aggressive subtype; and iii)

disorganized attachment - extremely violent and bizarre subtype. Plitt's study suggested that attachment is more complex than the classical attachment types, and particularly disorganized attachment, which is more varied than literature currently suggests.

Levy et al. administered two sets of attachment questionnaires (Bartholomew, 1990; Batholomew & Horowitz, 1991; Hazan & Shaver, 1987, 1990) and ORI (Blatt, Wein, Chevron, & Quinlan, 1979; Blatt, Chevron, Quinlan, Schaffer, & Wein, 1992; Blatt, Bers, & Schaffer, 1993; Diamond, Blatt, Stayner, & Kaslow, 1992) to 189 university students with a mean age of 19 (53% male and 47% female). The securely attached participants described their parents as kind and nonpunitive, and representations were differentiated.The parental representations of dismissive-avoidant particpants were less differentiated, and more punitive and malevolent. Interestingly, although fearful-avoidant participants also experienced their parents as punitive and malicious, their descriptions were well-differentiated. The parental descriptions of anxious-ambivalent participants were both punitive and benevolent. These results indicate that while there is a relationship between secure attachment and quality of object relations, a relationship with insecure attachments is not clear. In other words, it is not possible to anticipate and describe the quality of object relations for each insecure attachment type.

The Social Cognition and Object Relations Scale (SCORS) has been used in a handful of studies to investigate object relations and attachment (Pinto et al., 2011; Calabrese et al., 2005; Ortigo et al., 2013; Stein et al., 2011). My research is the only known study to have done so with middle-age children from a deprived context. The SCORS is an established measure of object relations in the literature (Goodman, 2004). There is a need to understand less differentiated object relations (Moon, 1999), and how IWMs can help to articulate these object relations (Goodman, 2004). According to Martinez (2006), disturbances in early relationships will compromise the quality of object relations (and attachment).

Other than the sample (in terms of age and socio-economic context) and research design, the study by Pinto et al. (2011) was similar to the present study, as they administered the Attachment Story Completion Test to 51 children aged between five and seven years of age, and applied the SCORS to analyze the internal object world. The only significant (positive) correlation was found between secure attachment and Affective Quality of Representations (AQR). The findings suggest that attachment and object relations are not comparable in five- to seven-year-olds, although there is alignment between security and the experience of relationships as more benign or more malevolent.

Stein et al. examined the relationship between the SCORS and attachment in 45 patients (76% female) attending a university-based clinic. Attachment was measured through two self-reported questionnaires, namely the Relationship Questionnaire (RQ) and the Experiences in Close Relationships Questionnaire-Revised (ECR-R). Although statistical trends were evident between the variables (for $p < 0.10$) and were cited by the authors as further evidence of a relationship, only three relationships were significant between the SCORS-G dimensions and RQ styles, namely secure attachment in relation to AQRs and Self-esteem (SE), and preoccupied attachment in relation to Emotional Investment in Relationships (EIR). While the authors foreground points of convergence, the results provide more evidence for differences between the constructs rather than similarities, although secure attachment seems to be somewhat better aligned with object relations.

In a recent study, Ortigo et al. (2013) explored how object relations may mediate the relationship between attachment and PTSD symptoms in a sample of impoverished adults attending a medical facility. The incidence of trauma exposure was significantly high at 84.1%. The researchers administered two scales of the SCORS-G (Hilsenroth, Stein, & Pinsker, 2007; Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2017) - namely the SE and AQR scales - and the Adult Attachment Prototype Questionnaire (AAPQ) (Westen & Nakash, 2005; Westen, Nakash, Thomas, & Bradley, 2006). The AAPQ is a continuous measure of attachment and classifies attachment as secure, dismissing, preoccupied and disorganized. Both scales of the SCORS-G correlated significantly with the four

attachment styles, positively for secure and inversely for the insecure styles. Three adult attachments (secure, preoccupied and disorganized) and object relations also correlated significantly with childhood trauma. An increase in security was associated with less childhood trauma. Furthermore, object relations were shown to mediate the relationships between Post-Traumatic Stress Disorder (PTSD) symptoms and attachment. The better-developed object relations complemented the influence of secure attachments, and dampened the effects of preoccupied and disorganized attachments on the experience of PTSD symptoms. Thus, more mature object relations can help to stabilize attachment security and the sense of safety in the face of environmental challenges. Here object relations are available as an internal resource.

In the study by Calabrese et al. (2005), 65 students with a median age of 28 completed the RAQ (West et al., 1987) and narratives were scored using the SCORS. The RAQ categorizes attachment according to five styles, namely: *proximity seeking*, *separation protest*, *feared loss*, *perceived unavailability*, and *lack of use of an attachment figure as a secure base*. Most of the correlations were not significant, with *lack of use* and *perceived unavailability of an attachment figure* showing the most number of significant relationships, namely *lack of use of an attachment figure* with Complexity of Representation of People (CRP) and Emotional Investment in Relationships (EIR), and *perceived unavailability* with aggression (EMAI) and SE. However, as more object relation dimensions correlated with both the students' current relationship status and their parents' marital status, the authors concluded that the findings support the hypothesis of a partial link between IWMs and object relations, but that "attachment-related processes are a subset of the processes that fall under the rubric of object-relations theory" (Calabrese et. al., 2005, p.524). However, Calabrese and colleagues do not clarify the meaning of this. Further, since their study used different attachment categories, it complicates comparisons between the SCORS object relation scales and classical attachment types.

Interestingly, points of convergence and divergence differ across studies, which may be a function of developmental age and context as these variables have differed in the studies. Furthermore, very few studies have explored attachment intensity in relation to object relations (Brandon, 2006; Stein et al., 2011). Given the complicated relationship between attachment and object relations suggested by the literature review, it is important to determine whether attachment intensity or attachment complexity mediates the relationship. This will help to further refine the articulation between these constructs.

4.2.4 Conclusion

While previous studies have been helpful in guiding our thinking in terms of how object relations and attachment interact, much about this relationship remains unknown. The review of both theoretical and empricial research indicates that a more refined understanding of both constructs is needed (Calabrese et. al., 2005; Goodman, 2004). While there seem to be points of convergence, and both positions support the importance of the early mother-infant relationship, the relationship between IWMs and object relations does not appear to be direct. It is noteworthy that empirical studies conducted tend to foreground points of convergence between IWMs and object relations by highlighting significant correlations and even reporting statistical trends (where $p < 0.10$) (such as Stein et. al., 2011), rather than also focusing on the points of divergence, of which there are many. From the literature review, it is suggested that attachment theory and object relations theory each provide a unique contribution to understanding psychological development, but that the nature of this difference remains uncertain. However, more certain is that the concepts *attachment* and *object relations* cannot be used interchangeably.

4.3 Attachment and Intensity of Emotion

While attachment security is related to competency in emotional regulation in Western societies, it is not known whether this relationship is replicated in non-Western societies (Kerns et al., 2006). This section will explore the relationship between attachment and intensity of emotion by examining the emotional world according to attachment theory; and then discuss empirical links reported in the literature between attachment and emotional functioning.

Bowlby describes an intense emotional world and an *inherent* love-hate relationship with the care-giver (1973). Here love and hate are used as expressions relating to polar opposites of experienced emotions, and are not meant to imply a restricted range of affect. The intensity of the emotions experienced reveals the quality of the underlying attachment relationship: “one of the major effects of mother-child separation is a great intensification of the conflict of ambivalence" (Bowlby 1973, p.11). While Bowlby suggests a recognition of an ambivalent relationship pattern as instinctual, he then continues:

> … emotions are usually a reflection of the state of a person's affectional bonds, the psychology and psychopathology of emotion is ... in large part the psychology and pathology of affectional bonds … Many of the most intense emotions arise during the formation, the maintenance, the disruption, and the renewal of attachment relationships. (Bowlby, 1991, p.306)

The formation of a bond is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone. As a result, threat of loss arouses anxiety and actual loss gives rise to sorrow; and each of these situations is likely to arouse anger. The unchallenged maintenance of a bond is experienced as a source of joy (p.306).

Bowlby describes emotions experienced as secondary to the attachment relationship, and not as instinctual. Bowlby’s reference to an *inherent* love-hate relationship speaks of his construction of the infant’s internal world and his/her potential for experiencing certain emotions; and while the actual emotions felt arise in response to the attachment relationship, their intensity may be an indication

of how unresolved the ambivalence is. The infant expresses despair or hate in response to loss or separation from the caregiver, aimed at drawing the caregiver back into physical proximity to the infant. Conflict is felt in response to the threatened or real loss of the attachment figure, rather than conflict felt in response to instinctual envy, hate, jealousy, greed, aggression, etc. as elaborated by psychoanalytic theories. Here we can see that the divergence between psychoanalytic and attachment thinking is ontological: in attachment theory, emotions arise in response to the strength of affectional security; while in psychoanalytic thinking, emotions also have an instinctual base.

Ainsworth (1978), as well as neuroscientific research (Gerhardt, 2015), stress the importance of high levels of responsiveness and affect regulation during the attachment process: “In the absence of experiences of external modulation of affect, the infant brain is unable to learn self-regulation of affect" (Glaser, 2000, p. 101). It is the role of attachment systems to regulate emotions (Sroufe, 1990) which is supported by neuro-scientific research (Gerhardt, 2015; Schore, 1994, 2003, 2018). Early infantile experiences of pleasure and displeasure create internal bodily states from which the brain constructs representations akin to Bowlby’s IWMs (Gerhardt, 2015). Deficits in self-regulation manifest in a limited capacity to modulate the intensity and duration of affects, especially biologically primitive affects like shame, rage, excitement, elation, disgust, panic-terror, and hopeless-despair (Schore, 2003). The intensity and repertoire of emotions experienced indicate the type of attachment or real relationship experienced. Hence this research will investigate the intensity of emotions experienced (positive, negative and overall) in relation to attachment security.

4.3.1 Empirical studies

The link between affect regulation and attachment is strongly supported theoretically (Cassidy, 1994) but is surprisingly under-researched in the way it pertains to children’s emotional development, according to Kerns and colleagues (Kerns et al., 2007; Parrigon et al., 2015). Overall, securely attached children have been associated with more positive mood, and disorganized or resistant-ambivalent attachments with more negative mood (Kerns et al., 2007). More specifically,

secure attachments have been associated with smiles and joy (Becker-Stoll, Delius, & Scheitenberger, 2001); open expressions of emotions and adaptive mood regulation (Cassidy, 1994); their use of attachment figures to regulate emotions (Sroufe & Waters, 1977); a mature understanding of mixed emotions (Steele, Steele, Croft, & Fonagy, 1999); and being less angry and fearful between the ages of two and three, even in situations that prompt anger and fear (Kochanska, 2001). Interestingly, attachment was found to be more significantly related to the capacity to regulate emotions than to mood (Kerns et al., 2007).

Infants with avoidant attachments tend to minimize emotions, especially negative affect (Cassidy, 1994); show sadness but turn away from the mother (Becker-Stoll et al., 2001); suppress anger, hostility and envy, remaining indifferent in interpersonal situations (Mikulincer & Shaver, 2005); and become more fearful between nine months and 33 months of age (Kochanska, 2001).

Infants with resistant-ambivalent attachments escalate emotional arousal to attract attention from the attachment figure (Cassidy, 1994); express anger (Becker-Stoll et al., 2001), despair, shame, distress and ambivalent feelings (Mikulincer & Shaver, 2005); and are the most fearful and least joyful of infants (Kochanska, 2001).

Disorganized infants become angrier between nine months and 33 months of age (Kochanska, 2001). Disorganized and ambivalent children in middle childhood are reported to be more susceptible to experiencing depression and anxiety (Graham & Easterbrooks, 2000), while disorganized and avoidant children struggle the most with hostile and aggressive feelings (Wartner, Grossman, Fremmer-Bombik, & Suess, 1994).

Mikulincer and Shaver reviewed and tabulated relevant literature to provide a guide to the anticipated emotional reactions for different adult attachment types in response to relational events (2005). Secure individuals tend to be more positive, sharing in their partner's happiness, joy and achievements, expressing love and gratitude, feeling appropriate guilt, and making overtures to

repair when they are the source of distress; as well as being empathic, compassionate, and functionally angry in response to their partner's negative actions.

For avoidant individuals, negative emotions are much more accessible and they tend to respond with hostility or envy to their partner's happiness; while pitying, attacking or resenting distress in their partner. Negative behaviours are responded to with resentment, hostility or suppressed anger. Hostility and resentment tend to be easily provoked.

Adults with anxious attachments respond with resentment, hostility, anger, despair and sadness but tend to be ambivalent in their feelings. For example, in response to a partner's positive behaviours these individuals feel love and happiness as well as fear and anxiety. When their partner feels happy outside of the relationship, the individual feels jealous and anticipates separation whilst also sharing in the happiness. When their partner is distressed within the relationship, shame and despair is felt while relationship-irrelevant distress evokes personal distress.

The relationship between emotionality and attachment is particularly under-researched in the middle childhood age cohort (Graham & Easterbrooks, 2000). Of the limited studies available, the results suggest that there is a relationship between attachment and mood as reported in research with younger and older samples. A study of 52 middle-age children from schools in the USA reported an association between secure attachment and positive emotionality, while ambivalent and disorganized attachments were associated with negative emotionality (Kerns et al., 2007). It will be important to investigate whether this pattern is reported in a sample of preadolescent children from a deprived context. Furthermore, according to Bhana (2010), emotional security during middle childhood is not influenced only by the security of early attachment, but also by parenting style, disciplinary measures, parental psychopathology, socio-economic factors, the parental relationship and cohesion of the family structure.

4.3.2 Aggression as instinctual versus a response to deprivation

Whilst the relationship between observable, and therefore measurable, intensity of emotion and attachment security has been discussed above, the influence of unconscious processes on attachment security has not been sufficiently considered in the literature.

Aggression and intense feelings of anger are indicators of impairment in the attachment relationship. For Bowlby, the aim of aggression is to bring the caregiver back into relationship with the child and is a consequence of real life deprivation (Bowlby,1979). This view is supported by Winnicott (1956/1984, 1964/1987) although psychoanalytic theory in general tends to understand aggression as an instinct (Klein, 1975; Phillips, 1988; Winnicott, 1975/1992). Aggression is also conceptualized psychoanalytically as an expression of the life force and drive for self-realization (Phillips, 1988). Feeding can be experienced as a potential attack on the breast or the wish to greedily empty the breast of its contents in psychoanalytic thinking (Klein, 1957/1984), which is different to the benign attachment view that feeding meets the needs for nutrition and physical closeness to the attachment figure (Bowlby, 1982).

While attachment theory describes the aggressive and even violent behaviours that result in response to absent parents (Bowlby, 1979), and the consequence of children with grossly impaired attachments (Lyons-Ruth, Alpern & Repacholi, 1993) or non-attachments (Zeanah, Boris, & Lieberman, 2000), attachment theory does not explain how these infants or children survive psychologically or understand the thwarting of their attachment needs. Even Klein, who conversely was preoccupied with the internal experience, acknowledged the influence of the external environment in abusive or neglectful situations (Klein, 1945). Different psychoanalytic theories provide explanations for how the infant/child survives psychologically or dies psychically in the face of extreme deprivation (Winnicott, 1974; Brenman, 2006).

Interestingly, pathogenic care is not a prerequisite for nonattachment to occur (Zeanah et al., 2000).

Nonattached children are not able to regulate their emotions, and tend to be withdrawn and inhibited, or to display indiscriminate sociability which can leave them vulnerable to exploitation and abuse by unscrupulous elements. However, why pathogenic care is not a prerequisit for nonattachment, despite the strong biological drive to attach, cannot be explained by attachment theory alone (Fox & Calkins, 1993).

4.4 Defenses in Object Relations versus Attachment Theory

This section will describe how Bowlby positioned attachment strategies in relation to defenses, how contemporary attachment researchers have positioned this relationship, and the questions that have subsequently been raised.

Within the social system, certain behaviours are triggered to ensure the proximity of the attachment figure for survival, referred to as attachment-related defensive processes by Bowlby (1980). As attachment needs are considered expressions of normal developmental needs rather than pathological, Bowlby replaced the term *anxious* attachment with *insecure* attachment (1973) to reflect that these needs have not been met. While Bowlby (1979) did refer to the employment of psychodynamic defenses, he referenced them regarding attempts to evade and deny the conflict of ambivalence experienced in relation to the attachment figure, although these attempts would be unsuccessful. Thus, while Bowlby acknowledged psychodynamic defenses, he did not reduce them to applying only to a secure or insecure attachment style.

However, according to Fonagy (1999), Bowlby's (1980) IWMs are comparable to ego defenses. Comparing Anna Freud's work on ego defenses, Fonagy and colleagues (Fonagy et al., 1992) proposed that attachment patterns be considered defensive behaviours that help the child to manage interactions with caregivers. Here, the ego adaptively develops attachment patterns aimed at reducing anxiety and promoting infant survival (Fonagy, 1999). Resistant ambivalent attachment

patterns elicit the caregiver's attention, while disorganized behaviours reflect the immaturity of the ego to coherently organize an adaptive response (Fonagy, 1999). This view of the defensive function of attachment styles has been reiterated by other authors (Colin, 1996; Howe, 2005). Avoidant infants defend against rigid, aversive, rejecting or frustrated care-giving, while anxiously ambivalently attached infants defend against unpredictable, inconsistent and poorly timed responses (Colin, 1996).

For Howe, attachment in environments of maltreatment is best understood as "a mechanism that allows the individual to live with and psychologically survive - at least in the immediate term - experiences of severe attachment threat and anxiety" by disconnecting, deactivating or disassociating (2005, p. 48). Similarly, according to Howard Steele, the Adult Attachment Interview, Story Stem method and Strange Situation all measure the extent to which defensive processes are galvanized to manage difficult emotions in response to the attachment figure (email communication, 21 December, 2013).

The above views contrast with the Freudian understanding that defenses are employed to deflect internal pain rather than external threat (Holmes, 1997). In psychoanalytic theory, defenses are galvanized by the ego both to reduce anxieties stemming from instincts and internal anxieties (Klein, 1945), and to maintain psychic balance (Renn, 2010). This differs from attempts by the infant to bring the caregiver into relationship with him/her (as seen with ambivalent attachment behaviours), or to defend against the expression of attachment needs (as seen with avoidant attachment behaviours). Attachment strategies are not employed to manage anxieties that originate internally, and most internal conflicts are unconscious and therefore outside of conscious awareness (Emde, 2007). Main and colleagues (1985) seem to accommodate both the IWMs of attachment theory and the defenses of psychoanalytic theory when they suggest that defenses exclude information that could update insecure working models from conscious awareness; thus, defenses operate more unconsciously and IWMs more consciously. Psychoanalytic theories explain the mechanisms or

routes to which the baby relates when making use of objects to manage internal anxieties (explored earlier). The process by which the infant acts on, or the way s/he responds to the object (for example through defenses such as splitting, projecting, introjecting, withdrawing, projective identification, etc.) indicates an active and dynamic internal world in which experience is constantly being mediated by internal processes.

Empirical research exploring attachment styles in relation to defense styles is limited and the results inconclusive. In a cohort of 86 parents who abused their children (through neglect, physical or sexual abuse, or exposure to violence), parents with a fearful attachment style made the most use of denial, whilst those with an ambivalent attachment style employed identification (Cramer & Kelly, 2010). Three defenses were assessed for, namely projection, denial and identification, using the Defense Mechanism Manual developed by Cramer (1987; 1991b). A study of the relationship between attachment style and defences using the same defense questionnaire on 106 adolescents from an inpatient mental health facility reported limited significance (Wiebe, 2006), although a degree of ambivalence was also linked to greater use of identification. However, contrary was the result that avoidance rather than fearfulness was linked to the greater use of denial in an adolescent population. An additional finding was that as attachment insecurity increased, so did use of projection.

In a Chinese study, attachment anxiety and avoidance (as measured by the Experiences in Close Relationships Scale) correlated significantly with an immature and intermediate defense style (as measured by the Defense Style Questionnaire) in a group of depressed (n = 50) and non-depressed (n = 60) adults (Bi & Yang, 2008). Greenfield (2015) administered the same set of questionnaires to 270 patients attending a university outpatient clinic, and found that anxious and avoidant attachments predicted greater use of more primitive defenses and less employment of more mature defenses.

A study on 214 Tehran students in young adulthood reported a conclusive relationship between

attachment styles and defense styles as measured by the Defense Styles Questionnaire (Besharat, Irawani & Sharif, 2001). Secure attachment was significantly related to the use of mature defences, whilst insecure attachments were significantly related to the use of neurotic and immature defenses. Moreover, ambivalently attached students made greater use of neurotic and immature defenses compared to avoidantly attached students.

A correlational study by Robinson (2013) utilizing data from this study reported no relationship between the variables. As the age of participants in these studies differed, it is possible that age is an important determinant of the relationship between the variables, as age has been shown to impact on defense usage (Cramer, 2008), including during middle childhood (Cramer, 2002). Research on the relationship between attachment and defense styles in middle childhood is limited.

Further to this, environment and the interplay between age and environment, has been shown to influence use of defenses (Cramer, 2009). For example, the use of denial was greater and the use of projection less than expected in an adult group with a deprived childhood background; but identification, which emerges later in development, was unaffected. However, adult SES status was not found to impact on defense usage.

Gabbard (2005) classifies defenses according to a hierarchy of health, with mature defenses at the pinnacle followed by higher-level neurotic defenses, and then primitive defenses at the base. Attachment patterns have similarly been classified as existing along a continuum from secure, to avoidant or resistant / ambivalent, to disorganized (no qualitative distinction is made between the health of avoidant and resistant / ambivalent) (Hesse, 1999). However, the study by Besharat, Irawani and Sharif (2001) suggests that avoidant attachment is more coherent compared to ambivalent attachment. Insecure attachments are also differentiated between insecure-organized (avoidant and ambivalent) and insecure-disorganized (Jacobvitz & George, 1996). It is a hypothesis of this research that the less-organized attachment systems will be associated with more primitive defensive functioning.

Defenses that are mobilized early are considered more primitive than those constellated at a later developmental stage (Goldstein, Freud & Solnit, 1984). In order to provide more clarity to the relationship, and particularly in the middle childhood age cohort, this research will explore whether attachment patterns are comparable to psychodynamic defense styles; specifically, mature (compromised of humour, identification, altruism and suppression), self-oriented (denial, idealization, somatization, withdrawal and omnipotence), other-oriented (projection, devaluation, splitting and passive aggression) and immature defense styles (fears and phobias, regression, and weak or absent ego controls). Furthermore, this study will explore whether attachment intensity or attachment complexity (identified in this study as the presence of two or more maternal attachment styles) moderates the relationship between attachment type and defense styles; and this is the first known research to do so.

4.5 Overall Conclusion

This research has elaborated on the points of contact and departure between psychoanalytic theory and attachment theory through the exploration of attachment in relation to object relations, intensity of emotion, and defense styles. While alignment between IWMs and object relations has been at the forefront of bridging the psychoanalytic and attachment paradigm, closer investigation of the theoretical and empirical literature indicates that despite these points of alignment, the constructs are not identical theoretically or practically. Ainsworth's emotionally responsive parent regulates behaviour by helping the infant to organize and understand his/her world through interpreting his/her behaviours, thereby developing a sense of self. The infant then slowly internalizes this function of self-regulation and mediation of experiences.

However, the greater body of evidence does not support equivalence between attachment style and quality of maternal representation. While research indicates a relationship between attachment and

affect regulation, research into this in middle childhood is still limited (Parrigon et al., 2015), and more so within the context of deprivation. Impaired attachment patterns have been understood to be defensive behaviours organized in response to insensitive or inconsistent parenting. What remains unclear is whether attachment styles are comparable to psychodynamic defense styles.

To address the aforementioned gaps in the literature, this research will explore the distribution of attachment, and relationships between attachment and internal world functioning in a sample of environmentally disadvantaged SA children in middle childhood. The markers of internal world functioning are object relations, intensity of emotion and defense styles. Thus, the research will attempt to answer the following questions:

1. How is attachment distributed in a sample of socially and economically disadvantaged South African children?
2. What are the relations between the various attachment types, attachment complexity, and attachment intensity?
3. Does *attachment complexity* moderate the relationship between primary attachment type, and object relations, intensity of emotion, and defense styles respectively, in this sample?
4. Does *attachment intensity* moderate the relationship between attachment type and object relations, attachment complexity, intensity of emotion, and defense styles respectively, in the sample?
5. What is the relationship between attachment and object relations?

Chapter Five: Method

Terms and acronyms: Chapter Five

ANOVA – Analysis of Variance

ASCT - Attachment Story Completion Test

CADS - Comprehensive Assessment of Defense Style

DES - Differential Emotions Scale

DES-III - Differential Emotions Scale-III

DES-IV - Differential Emotions Scale-IV

GLM - General Linear Models

ORI - Object Relations Inventory

SCORS - The Social Cognition and Object Relations Scale

SCORS-G - The Social Cognition and Object Relations Scale – Revised G

SSAIS-R - Senior South African Individual Scale – Revised

TAT - Thematic Apperception Test

5.1 Aims of the Study

The study explored the distribution of attachment patterns in an economically and socially disadvantaged sample of pre-adolescent children, and investigated the relationship between attachment and internal world functioning. Specifically examined were the interrelationships

between attachment type, complexity of attachment, intensity of attachment, and markers of internal world functioning including object relations, intensity of emotion, and defense styles.

The first aim of the study was to describe the sample in terms of their attachment, quality of object relations, intensity of emotion, and defenses. The second aim was to conduct an exploratory investigation of interrelations between attachment type, attachment complexity and attachment intensity. The third aim was to analyze attachment type in relation to object relations, intensity of emotion and defense styles, and to consider whether any of these relationships are moderated by attachment complexity or attachment intensity.

5.2 Research Questions and Hypotheses

The following terms will be used in the analysis when referring to the different aspects of attachment measured in this study: attachment complexity will refer to whether the attachment is *simple* or c*omplex*. In a simple attachment, only a primary (or single) attachment type is identified. A complex attachment is indicated by the presence of a primary as well as a secondary, and at times tertiary, attachment type. Attachment intensity references the intensity of the attachment. Each attachment classification made (for the primary, secondary and tertiary levels) was rated for attachment intensity according to a range of *1 to 5,* in accordance with the Attachment Story Completion Test (ASCT) method of scoring (discussed further under 'Measures' below). For example, a child can have a primary secure attachment classification with an intensity rating of 4, and a secondary avoidant attachment with an intensity rating of 2. Such an attachment configuration would be classified as *complex*.

1. <u>How is attachment distributed in a sample of socially and economically disadvantaged South African children?</u>

   To answer this broader research question, the following specific questions were explored:

   a. Attachment types

      i. What is the frequency of primary secure, avoidant, ambivalent and disorganized attachment type in this sample?

   b. Attachment complexity

      i. What is the frequency of simple and complex attachments?
      ii. Looking at complex attachment alone, (i.e. at the secondary and tertiary attachment level), what is the frequency of attachment types?
      iii. What is the percentage of secondary attachment classifications for each primary attachment type?
      iv. What are the patterns for complex attachments in this sample?

   c. Attachment intensity

      i. What is the frequency of attachment types for each attachment intensity score?
      ii. What is the distribution of mean primary attachment intensity for simple and complex attachments?

2. <u>What are the relations between the various attachment types, attachment complexity and attachment intensity?</u>

   Specifically, the following hypotheses were tested.

      a. There will be an association between primary and secondary attachment type.

b. There will be an association between attachment type and primary attachment intensity.
c. There will be an association between attachment complexity and primary attachment intensity.
d. There will be an association between attachment types as a function of attachment intensity.
e. Attachment intensity will differ across attachment complexity levels. Specifically, attachment intensity at the primary level will be negatively correlated with intensity at the secondary and tertiary level. In addition, this is expected to be a linear relationship.

3. Does **attachment complexity** moderate the relationship between attachment type, and object relations, intensity of emotion and defense styles respectively, in the sample?

To address these broader research questions, the following research hypotheses were tested:

a. Object relations

i. The quality of The Social Cognition and Object Relations Scale-Revised (SCORS-G) object relations will differ as a function of attachment type and attachment complexity.
ii. Attachment type and attachment complexity will interact to predict quality of SCORS-G object relations.

b. Intensity of emotion

i. Intensity of emotion as reported on the Differential Emotions Scale-IV (DES-IV) will differ across attachment type and attachment complexity.

ii. Attachment type and attachment complexity will interact to predict intensity of emotion.

c. Defense styles

i. Comprehensive Assessment of Defense Style (CADS) defense styles will differ across attachment type and attachment complexity.

ii. Attachment type and attachment complexity will interact to predict CADS defense styles.

iii. Immature defenses as measured by items on the Haworth Analysis of Adaptive Mechanisms will differ across attachment type and attachment complexity.

iv. Attachment type and attachment complexity will interact to predict immature defenses.

4. Does **attachment intensity** moderate the relationship between attachment type, and object relations, attachment complexity, intensity of emotion and defense styles respectively, in the sample?

To address these broader research questions, the following research hypotheses were tested:

a. Object relations

i. The quality of SCORS-G object relations will differ as a function of attachment type and attachment intensity.

ii. Attachment type and attachment intensity will interact to predict quality of SCORS-G object relations.

iii. Attachment intensity and attachment complexity will interact to predict quality of SCORS-G object relations.

b. Intensity of emotion

i. Intensity of emotion as reported on the DES-IV will differ across attachment type and attachment intensity.

ii. Attachment type and attachment intensity will interact to predict intensity of emotion.

c. Defense styles

i. CADS defense styles will differ across attachment type and attachment intensity.

ii. Attachment type and attachment intensity will interact to predict CADS defense styles.

iii. Immature defenses, as measured by items on the Haworth Analysis of Adaptive Mechanisms, will differ across attachment type and attachment intensity.

iv. Attachment type and attachment intensity will interact to predict immature defenses.

5. <u>What is the relationship between attachment and object relations?</u>

Specifically, the following hypotheses were tested:

a. There will be an association between attachment intensity and SCORS-G object relations.

b. Secondary and tertiary secure elements will moderate relations between primary insecure attachments and object relations.

5.3 Research Design

The design of the research was quantitative, non-experimental, within-subjects and *ex-post facto* (Breakwell, Hammond & Fife-Schaw, 1997). As participants were tested once off, the design was also cross-sectional.

The study was exploratory in design, as this is the first known research to investigate attachment type, attachment complexity, and attachment intensity in a group of South African children identified as at risk (i.e. socially and environmentally disadvantaged children). The quantitative approach was appropriate for this study as the researcher was interested in exploring relationships and interactions between specific variables, namely attachment type, attachment complexity, attachment intensity, object relations, intensity of emotion, and defense styles. However, the design was non-experimental as there was no manipulation of variables.

5.4 Sample

Purposive and convenience sampling was used, as the researcher sought consent from the parents or legal guardians of children aged between 8 and 12 to invite them to participate. The design did not include a control group, random selection, or random assignment of participants. The three location types were an outpatient psychology and psychiatry clinic, children's homes and an inner-city school. Thus, both a clinical and nonclinical population was used. The clinical population comprised children and their parents or legal guardians attending an outpatient psychology clinic at a hospital in the greater Johannesburg region. The hospital primarily serves the surrounding area, previously designated as 'Coloured only' during the apartheid era in SA although patients also attend from suburbs further afield. The areas surrounding the hospital remain economically and socially disadvantaged, as residents battle high levels of crime, substance abuse, unemployment and domestic violence. The nonclinical population was drawn from a privately funded inner-city school

for children from socially and economically disadvantaged families in Johannesburg; and from five children's homes in Johannesburg and Pretoria. As a result, the children were all drawn from contexts where they were considered to be environmentally at risk due to high levels of economic, social and psychological stress (Epps & Jackson, 2000).

Race and the use of racial categories are debated in the literature (Dines & Humez, 2011; Ellison, 1997; Whitehead, 2012). The limited scope of this research does not allow for the kind of debate that would do justice to the many nuances involved when considering the use of racial categories in the context of South African research. However, the use of the term 'Coloured' will be briefly considered because of its uniqueness to the SA context. 'Coloured' is a South African racial category used during apartheid to designate persons of mixed race, who were given higher social status than Black South Africans but who were not seen as equal to White South Africans. It is still used in SA today by those in the 'Coloured' community who embrace it as a racial identity (Green, 2010; Hendricks, 2004).

Furthermore, the use of racial categories within frameworks such as research must be considered. As cultural differences are embedded in race (Cuffe, Waller, Cuccaro, Pumariega, & Garrison, 1995; Museus & Truong, 2008), racial categories need to be represented in the statistics to determine generalizability of the findings. The extent of generalizability is informed by including the specifics of who the sample is. Therefore, this study will use the following racial categories, 'White', 'Black', 'Coloured' and 'Asian'.

5.4.1 Inclusion and exclusion criteria

In addition to the age inclusion criteria, proficiency in English or Afrikaans was a requirement. This was to ensure that the children understood the instructions and could respond adequately to questions and successfully engage with the tasks. Children whose first language was neither English

nor Afrikaans had to be attending an English or Afrikaans medium school for at least two years to qualify for inclusion in the study, although the majority had attended such schools for five years.

Since little is known about the complexities or configurations of attachment, children diagnosed with autism, a brain injury, or intellectual disability were excluded from the study. Autism places children at greater risk of an insecure attachment (De Klyen & Greenberg, 2016; Van IJzendoorn et al., 2007), and the nuanced ways in which its consequent configuration might differ are unknown. Children with a known intellectual disability were excluded, given the query in the literature regarding the impact of intellectual functioning on attachment security (Muris & Maas, 2004; Schuengel & Janssen, 2006; Zeanah & Gleason, 2010). The Senior South African Individual Scale – Revised (SSAIS-R) Similarities subtest was included in the battery to screen for children with potential intellectual disabilities who had unknowingly been tested. However, general clinical disorders were not excluded and the study did not screen for possible clinical disorders in the general sample, as insecure attachment is a risk factor in the development of clinical disorders and is predictive of some disorders (De Klyen & Greenberg, 2016). Thus while autism and intellectual disability are likely to impact on felt security, insecure attachment places children at greater risk of developing clinical disorders.

5.4.2 Sample characteristics

The variables of age, gender, site, and race have been used to describe the sample and are presented in the table below. The protocols of a 105 children who participated in the study.

Table 5.1

Sample characteristics

	n	%
Age		
8	22	21
9	16	15
10	23	22
11	26	25
12	18	17
Gender		
Male	55	52
Female	50	48
Site		
Hospital	33	31
Children's Home	61	58
School	11	11
Race		
White	47	45
Coloured	14	13
Black	42	40
Asian	2	2

Ages ranged between eight and 12 years, with a mean age of 10.02 (*SD* =1.40). The distribution according to age was reasonable with the lowest participation for age being nine years (15%), and the highest for age 11 (25%). Forty-eight percent of the sample was female (n = 50) and 52% were male (n = 55). The sample was quite evenly distributed between male (52%) and female (48%) participants. Gender differences in attachment have not been found to be significant in middle childhood (Van Ijzendoorn et al., 1999), and were therefore not investigated. In relation to data collection sites, the highest representation was for children's homes (58%) followed by the hospital setting (31%), with the smallest representation for the school setting (11%). A percentage of the

participants from the hospital site were from children's homes, and since this would be their primary place of residence, their data were grouped with the children's home data. Ethnically, most participants identified themselves as Black (40%) or White (45%) with a small minority identifying themselves as Coloured (13%) and Asian (2%).

5.5 Measures

To test the research variables discussed in the literature review – namely: attachment type, attachment complexity, attachment intensity, object relations, intensity of emotion, and defense styles - the measures described below were used.

5.5.1 Attachment Story Completion Test (ASCT)

5.5.1.1 Development of the ASCT

The ASCT was administered as a measure of attachment type. The story stem technique has been validated for assessing attachment in pre-adolescence (Green, Stanley, Smith & Goldwyn,2000; Kerns, 2007, 2013; Kerns et al., 2011; Kerns, Abraham, Schlegelmilch & Morgan, 2007; Kerns, Schlegelmilch, Morgan & Abraham, 2005; Page, 2001). Storytelling is widely recognized as a natural, spontaneous way for children to give expression to their internal dynamics (Cramer, 2004; Matthews & Bouwer, 2009). Research into this age group has been hindered by the lack of a reliable measure of attachment security (Brumariu et al., 2018; Granot & Mayseless, 2001). As the child matures and separates from the attachment figure, attachment behaviours diminish so that in middle childhood perceived availability of the attachment figure rather than physical proximity to him/her is an indicator of attachment security (Bowlby, 1969/1982; Kerns, 2008). Thus, *representations* of the attachment relationship are assessed in this age group (Main et al., 1985). Granot and Mayseless

(2001)[1] adapted Bretherton's, Ridgeway's and Cassidy's (1990) ASCT for middle childhood (see appendix A for instructions). Kerns and colleagues built on the work of Granot and Mayseless to developmentally assess secure base behaviour in 8- to 12-year-olds by adding two story stems to the existing battery (Kerns et al., 2007; Kerns et al., 2011; Kerns, 2013) (see appendix B). These additional story stems were included in this study.

Other story stem tests, such as the Manchester Child Attachment Story Task (MCAST) also assess attachment in middle childhood (Green, Stanley, Smith, & Goldwyn, 2000). The MCAST is very similar to the ASCT (O'Connor & Byrne, 2007) but the ASCT was chosen as more literature on the ASCT was available for the researcher to dialogue with. Kerns and colleagues, who modified the ASCT for use in middle childhood, are also at the forefront of contemporary developments in understanding attachment in middle childhood (Kerns & Brumariu, 2016).

It is also important to mention that preliminary validation of a new observational measure of attachment in middle childhood, the Middle Childhood Attachment Strategies Coding System (MCAS) (Brumariu et al., 2018), has recently been provided. This measure offers an alternative avenue for assessing attachment in middle childhood.

5.5.1.2 Administration

The researcher was trained in the administration of the ASCT by Professor Kathy Kerns at Kent State University in Cleveland, America, and remained in email contact with her to discuss any administrative or scoring queries. The researcher also obtained special permission from Granot and Mayseless to use and cite their training manual.

During administration, the interviewer used dolls and props to begin telling stories with attachment related themes. The child then completed the stories using the materials provided. The child in the story was matched to each participant's gender. The seven story stems were: 1) during dinner the

[1] The revised scoring manual by Granot and Mayseless (2001) is available from the authors on request.

child accidentally spills juice; 2) the child falls off a rock and hurts his/her knee; 3) s/he is frightened by something after going to bed; 4) the child is left with a sitter for three days, and 5) the mother and child are reunited after the separation; 6) conflict with a friend; and 7) a homework completion task (Kerns et al., 2011; Kerns, 2013). Completed stories were then read and classified according to attachment type.

5.5.1.3 *Scoring*

To begin with, each story was classified as secure versus insecure. The four criteria used to classify the stories as such were: a) relationship with caregivers (e.g. warm versus distant for 8- to 9-year-olds), or coordination of action (for 10- to 12-year-olds) (Kerns et al., 2001; Kerns, 2013); b) resolution of negative affect or conflict; c) expression and regulation of emotion; and d) narrative coherence (e.g. logical progression of reasonable events versus inclusion of tangential or odd events) (Granot & Mayseless, 2001).

The insecurely rated stories were then further classified as avoidant, ambivalent or disorganized. Characteristics of the different attachment strategies were noted (such as 'open and flexible' responses in secure stories, 'heightening' of emotion in ambivalent narratives, 'minimizing' of feelings in avoidant stories, and 'chaotic' behavior in disorganized narratives).

The ASCT is coded according to both verbal and nonverbal responses, as the child is given props to facilitate the telling of the story. In secure base stories, parent and child engage in reciprocal interaction, the child openly expresses both positive and negative emotion, and the parent calmly responds to any distress shown by the child (Kerns, 2013). In the narratives of avoidantly attached children, problems are minimized, little emotion is expressed, and narratives are brief but coherent. Ambivalently attached children use heightening strategies which intensifies affect, and problems are escalated, necessitating the caregiver's continued attention. Children with a disorganized attachment may introduce fright, chaos, or danger into their narratives, and problems fail to resolve,

or solutions offered are unrealistic. Refer to appendix C for the scoring form. Two raters scored over 50% of the protocols, selected randomly, to establish interrater reliability. This is discussed further in section 5.7.3.

5.5.1.4 *Scoring attachment intensity*

For all seven story stems, an attachment classification was made according to a range of one to five. These scores were then used to guide the overall dominant attachment classification (for example, ambivalent type with an intensity rating of four denotes clear resemblance to an attachment type, see table 5.2 below). Where there was evidence of additional secondary and/or tertiary attachment strategies, these were also noted.

Kerns et al. (2011) refers to the use of continuous scales of attachment patterns to describe the full range of scores (i.e. from a prototypical attachment pattern to merely signs of a pattern). Where comparison groups are small, continuous ratings help to avoid encountering issues with low power in the analysis (*ibid*.). The attachment intensity scoring guidelines that were used are described below:

Table 5.2

Attachment intensity

Rating	**Attachment Intensity**
Prototypical attachment type	5
Clear resemblance to an attachment type	4
Shows resemblance to an attachment type but lacks some elements	3
One or two signs of a specific attachment pattern	2
No sign of an attachment pattern	1

5.5.1.5 *Classifying attachment complexity*

The ASCT was chosen as the measure classifies attachment along a continuum and allows for more than one attachment strategy to be identified, which will allow for a more nuanced classification of attachment.

As previously mentioned, attachment could be classified as simple or complex. A simple attachment was indicated when only a primary attachment classification was made. However, a participant could receive a primary disorganized attachment rating of 5, a secondary ambivalent attachment rating of 3 and a tertiary avoidant attachment rating of 2. A complex attachment was indicated when a participant received a primary attachment classification and at least a secondary attachment classification.

5.5.1.6 *Cultural validity*

Regarding the validity of applying attachment theory cross-culturally, Bowlby was clear that his theory applies universally to the child (1969/1982, 1973, 1980). The cross-cultural validity of attachment has been supported by additional studies in non-Western contexts (Ainsworth, 1967; Bain et al., 2016; Matthews, 2017; Douglas, 2011; Mesman, van Ijzendoorn, & Sagi-Swartz, 2016; Minde et al., 2006; Plit, 2013; Pritchett et al., 2013; Robinson, 2014; van der Merwe & Gericke, 2009). Solomon and George (1999) argue that if attachment measures are based upon ethological attachment theory, they can be used to describe attachment behaviours across cultures. Granot and

Mayseless' adaptation of the ASCT has been validated on an Israeli (2001) and American sample (Kerns et al., 2007), and used in exploratory research assessing attachment in middle age children in SA (Douglas, 2011, 2012; Plitt, 2013; Robinson, 2014).

Preliminary studies point to the validity of the ASCT on a South African sample (Douglas, 2011; Gericke & Bain, 2012). In the Gericke and Bain study, all seven story stems correlated significantly with the overall attachment classification suggesting the validity of both the measure and each of the seven story stems in the South African context. Thus, all seven stories were administered. This research contributes to the very limited literature available on the validity of the story stems and the ASCT among South African children. However, culturally familiar names were used for children whose first language was not English or Afrikaans (i.e. 'Thabo' was used instead of 'Bob' and 'Thandi' instead of 'Jane'). Furthermore, given the caution in the literature that Western versus non-Western displays of maternal sensitivity are not uniform (Dawson et al., 2018; Mesman et al., 2015; Mesman et al., 2017), it was decided that assessing children's level of felt security, rather than maternal sensitivity, would be less vulnerable to cultural bias.

5.5.1.7 *Psychometric properties*

The construct validity of attachment had been determined (Pearce, 2009). The doll play technique in children between the ages of five and 12 has been recognized as valid, including in relation to other attachment measures (George & Solomon, 2016). The ASCT has demonstrated discriminant validity (Granot & Mayleless, 2001; Kerns at al., 2007). Inter-rater reliability across the four categories was 85% (Granot & Mayleless, 2001). The inter-rater reliability Cronbach's alpha for the first five story stems was .82 (or 88%) (Verschueren, Marcoen, & Schoefs, 1996), and between the range .65 and .92 for the two-story stems introduced by Kerns (Kerns et al., 2011). Test-retest stability over a three-month period was high (Granot & Mayleless, 2001). Findings of the ASCT were associated with perceptions of attachment security as measured by the Attachment Security Scale (Granot &

Mayleless, 2001). Attachment as measured by doll play story stems has shown relation to maternal behavior (Kerns et al., 2011).

5.5.2 Social Cognition and Object Relations Scale – Global Rating Method (SCORS-G)

5.5.2.1 *Development of the SCORS-G*

While object relations inventories saw steady development during the 1990's (Huprich & Greenberg, 2003), most are primarily intended for an adult population and the availability of child object relations inventories is sparse. Development of the SCORS was informed by the argument of Westen and colleagues that mental representations of self and others formed in childhood are enduring, and encompass separate developmental tracks such as social, cognitive and affective (Conklin & Westen, 2001). Thus, the inventory is multidimensional, and dimensions can be assessed independently of each other (Westen et al., 2002). To obtain the SCORS subscales, Thematic Apperception Test (TAT) stories are administered and then analyzed according to eight possible dimensions that are quantitatively scored (Kelly, 2007) (see below for descriptions). The TAT cards are designed to elicit valuable information about interpersonal functioning (Conklin & Westen, 2001).

Consequently, the data obtained is rich, multi-dimensional and the measure validated by the theoretical underpinnings that inform it (including object relations theory and developmental psychology) (Kelly, 2007). According to Westen et al., "the TAT evokes … a person's enduring repertoire of interpersonal schemas, expectancies, affects, wishes, fantasies, conflicts, and knowledge" (2002, p.9). The revised scoring sheet for the SCORS-G includes three additional dimensions and was obtained by the researcher from Westen. These scales are; Experience and Management of Aggressive Impulses, Self-esteem and Identity, and Coherence of Self (Stein et al. 2017; email correspondence with Westen 18/03/2010) (see appendix D.1 for the rating form).

To limit the number of variables in the analysis, and thereby avoid compromising statistical power, six of the of the possible eight dimensions of the scale were used in the analysis. The dimensions

selected were chosen as they assess the quality of object relations, while the two that were excluded focus on social cognition ('Emotional Investment in Values and Moral Standards' and 'Understanding of Social Causality'). The six dimensions are briefly described below (Kelly, 2007; Westen, 2002).

1) Complexities of Representations: As children mature, their differentiation of self versus other is expected to become more complex. Consequently, ability to distinguish between the thoughts and feelings of self versus others becomes more sophisticated.
2) Capacity for Investment in Relationships: This scale assesses the ability to initiate and maintain relationships by moving from a need for self-gratification to concern for others (from "me" to "thee", Kelly, p.171).
3) Affective Quality of Relationships: This scale measures children's primary affective experience of relationships as measured along a continuum from malevolent to benevolent.
4) Experience and Management of Aggressive Impulses: Children's experience and management of aggressive impulses is scored along a continuum that spans from physically assaultive or destructive, to being able to assert oneself appropriately when needed.
5) Self-esteem: Self-esteem is assessed along a continuum from experiencing the self as bad or evil, to experiencing realistic positive feelings about the self.
6) Identity and Coherence of Self: Narratives are assessed for the integration of identity, coherence of self, and consistency in commitments to long-term relationships and goals.

Previous studies have used the Blatt's Object Relations Inventory (ORI) (Blatt et al., 1979; Blatt et al., 1992; Blatt et al., 1993; Diamond et al., 1992) where participants were asked to describe their parents ('Describe your mother' and 'Describe your father') rather than asked to respond to unstyled stimuli, designed to elicit projections that bypass defenses (Gericke, Amod, & Bain, 2011). Avoidant attachment styles typically provide normalizing and generalized descriptions when asked directly about significant relationships (Hesse, 1999) thus very little information is elicited for analyzing the

quality of internal object relations. Narrative-based methods (such as the SCORS) are shown to be better predictors of future behaviour than self-report measures (such as ORI) (Westen, 1998). Further to this, children are reluctant to engage with or threatened by self-reports and questionnaires, and parents or teachers are often unable to articulate the complex psychological processes under investigation (Kelly, 2007). Correlations between narrative-based and self-report measures of attachment has been modest (Cassidy & Shaver, 1999) suggesting that the one measure can be used with more confidence than the other. The overall suggestion is that the SCORS can be used with more confidence.

5.5.2.2 *Administration*

The TAT is comprised of several picture cards. The child is shown a card and asked to tell a story about what is happening in the picture at that moment, what happened just prior to that moment, and what they think will happen shortly (Bellak & Abrams, 1997). The child's story is transcribed *verbatim*. To standardize the cards administered, the TAT cards recommended by Kelly (i.e.1, 2, 3BM, 7GF, 8BM, 9GF, 12M) (2007) and Gericke, Bain and Amod (2011) (I.e. 14) were administered, as the themes depicted in these cards allow for a comprehensive assessment of object relations. Eight TAT cards were administered to ensure internal consistency, as recommended by Westen et al. (2002).

5.5.2.3 *Scoring*

As the researcher has jointly administered and supervised over 850 child assessment protocols, all of which included projective tests, she is skilled in this area and therefore able to interpret and classify from projective protocols. For each story, a score of 1 to 7 was assigned for each of the six dimensions described above (see appendix D.2 for the scoring sheet). Scoring manuals available from http://www.psychsystems.net/Manuals/ or Stein et al. (2017) are easy to understand and apply. Additional training and scoring manuals were also consulted (Hilsenroth et al., 2007; Westen,

2002; Westen et al., 2002). All the data were scored one scale at a tie, as suggested by the authors (Westen et al., 2002). To ensure accuracy in scoring, all the TAT narratives were scored twice by the researcher.

5.5.2.4 *Cultural validity*

Given the cultural diversity of the South African population, it is important to consider the cultural validity of the TAT. The usability of thematic apperception methods in cross-cultural studies is supported (Holtzman, 1980), including with children of ethnic diversity (Mussen & Naylor, 1954; Rousseau, Corin, Morrison, & Stolk, 1986). The TAT is recognized by the Psychometrics Committee of The SA Health Professional Board for Psychology (http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/psych/List_of_Classified_tests_Board_Notice_155_of_2017.pdf) and is a preferred test amongst SA clinicians (Foxcroft, Paterson, Le Roux & Herbst, 2004).

According to Murstein (1965) and Hofer and Chasiotis (2004), the cultural validity of the TAT is not dependent on matching the participant's race to the race of the figures in the cards. Projective techniques are recommended for research on vulnerable and orphaned children in sub-Saharan Africa (Muhati-Nyakundi et al., 2017). Projection onto unfamiliar stimuli may allow participants' anxieties, conflicts and wishes to surface more easily than when cultural norms associated with culturally recognizable stimuli influences responses (Gericke, Amod & Bain, 2011). However, Moletsane (2004) strongly advocates for the importance of considering context and culture when using measures developed elsewhere. Several methodological concerns relating to method bias and item bias have been raised by authors such as Hofer and Chasiotis (2004). The concerns are: a) the stimulus pull of the picture cards may differ across cultural groups, and verbal cues should be used to clarify motives ascribed to characters; b) clear, detailed, and vivid instructions need to be given; and c) participants need to be given encouraging prompts, such as 'and then' and 'what happened next' (Bouwer, 2005). These guidelines were followed by the researcher. Matthews and Bouwer

(2009; 2013) describe this approach as a dynamic assessment that facilitates richer responses, and accommodates cross-cultural influences on responses and interpretations.

5.5.2.5 *Psychometric properties*

The SCORS has been validated for use on a child population from the age of 6 years (Kelly, 2007). The SCORS has an inter-rater reliability of r = .98 and a Cronbach's alpha of .80 to .90 (Huprich & Greenberg, 2003). The SCORS has been applied to clinical settings (Peters, Hilsenroth, Eudell-Simmons, Blagys, & Handler, 2006), assessment for psychodynamic psychotherapy (Price, Hilsenroth, Callahan, Petretic-Jackson, & Bonge, 2004), and assessment of personality pathology (Stein, Pinsker &, Hilsenroth, 2007; Westen & Shedler, 1999, 1999b). The SCORS composite score has a large effect (-.57 **) when correlated with a Personality Disorder Index (Hilsenroth, Ackerman, Blagys, Baumann, Baity, & Smith., 2000) and with the Global Assessment of Relational Functioning (.53 **); a moderate to large effect with the Social and Occupational Functioning Assessment Scale (.49 **); and a moderate effect with Global Assessment of Functioning (.44 **) (Peters et al., 2006). Thus the SCORS is a valid instrument for assessing personal and interpersonal functioning. However, a limitation of the SCORS is that it has not been compared with other object relations scales which would improve its validity and utility (Peters et al., 2006).

5.5.3 Differential Emotions Scale -IV

5.5.3.1 *Development of the DES-IV*

The Differential Emotions Scale-IV (DES-IV) (Izard, Libero, Putnam, & Haynes, 1993) was used to assess intensity of emotion in the sample. This scale comprises twelve fundamental emotions, namely: interest, surprise, joy, fear, sadness, embarrassment (or shyness), shame, guilt, contempt, disgust, anger, and self-directed hostility. The DES was originally developed by Izard and is based on her seminal work on human emotions (1972). Two scales, a shame scale and a self-directed hostility scale, were added to the DES-IV (Blumberg & Izard, 1986) (see appendix E.1 for the DES-IV

questionnaire). These scales are frequently used to assess intensity of emotion in children (Robins, Noftle & Tracy, 2007), operationalized as intensity of positive emotions and intensity of negative emotions experienced. The first emotions children correctly identify are anger, sadness, fear and happiness (Youngstrom & Goodman, 2001) and are included in the DES-IV.

The alternative measures, the Children's Coping Strategies Scale (Eisenberg, Fabes, Karbon, Murphy, Wosinski, Polazzi et al., 1996) and the Affective Intensity Scale (Eisenberg, Fabes, Bernzweig, Karbon, Poulin & Hanish, 1993), administered by Kerns and colleagues (2007) was not administered as many of the children were in temporary institutional care at the time of testing and it was felt that the house parents would not have sufficient knowledge of the children in their care to answer the questions.

5.5.3.2 *Administration and scoring*

The DES-IV is a 36-item scale and respondents' rate on a 5-point Likert scale (1= *rarely or never* and 5 = *very often*) the extent to which each emotion has characterized their day-to-day experience over the past week (see appendix E.2 for the scoring sheet). Positive Emotionality is the sum total of interest, joy and surprise whilst Negative Emotionality is the sum total of fear, sadness, embarrassment, disgust, anger, self-directed hostility, shame, guilt and contempt. To provide an indication of Overall Emotionality, the scores for Positive and Negative Emotionality were combined.

5.5.3.3 *Cultural validity*

Development of the DES was informed by research across cultures (Izard et al., 1993). Research into cultural differences in self-reported levels of emotions experienced has been well documented (Lim, 2016; Matsumoto, 1993). Western cultures favour and experience high emotional arousal whilst non-Western cultures favour and experience low emotional arousal (Lim, 2016).

5.5.3.4 *Psychometric properties*

The DES-IV has demonstrated good reliability and construct validity (Blumberg & Izard, 1986). The DES-III established validity for children as young as eight years (Kotsch, Gerbing & Schwartz, 1982).

Considerably less well researched is the reliability of self-reported levels across socio-economic groupings (Youngstrom & Green, 2003). In a meta-analysis of 30 studies using the DES-IV on participants ranging between 11 and 31, Youngstrom and Green determined that internal consistency is greater for the following emotions when SES is higher – anger, sadness, shyness, self-directed hostility, fear, guilt, enjoyment/joy and Positive Emotionality. However, when the effects of college education was controlled for, SES no longer impacted on the internal consistency of enjoyment/joy and Positive Emotionality. The authors suggest that people from a higher SES bracket are exposed to better education, greater vocabulary and more nuanced emotional repertoire thus enabling better self-report of emotions. Youngstrom and Green conclude with the caution "It is imperative that future studies not assume that the published reliabilities based on … high SES groups will generalize to low-income samples" (p.291). To address this concern, picture cards were used to assist children in identifying their feelings. The findings of my study will contribute to the paucity of research on the reliability of self-reported levels of emotions in low SES groups. Age was not reported as a significant variable among younger samples.

5.5.4 Comprehensive Assessment of Defense Style (CADS)

5.5.4.1 *Development of the CADS*

A shortened version of Natty Laor's 72-item CADS (Laor, Wolmer, & Cicchetti, 2001) for 6- to 18-year-olds was administered to assess defense style (i.e. other-oriented, self-oriented and mature). This assessment measure is available on request from the authors and does not require any training to score. In the full version, 29 defense mechanisms are included (see appendix F.1 and F.2) but due to several important considerations, 13 defenses were selected for assessment (see appendix F.3).

Many of the children in the study were being raised in children' homes by house parents who had not known them for a long time. Thus certain considerations guided the selection of defenses, namely: a) what behaviours could house parents have observed in the children; b) time constraints, as house parents were often looking after approximately 15 children; c) as this measure had not been used on this kind of sample before, items in the questionnaire were scrutinized as to whether the guardians would find them accessible or not; and d) defenses were selected that are commonly reported in the psychodynamic literature and could therefore be interrogated by this research. The defenses that best met these criteria were: a) other-oriented defenses – projection, devaluation, splitting, passive aggression; b) self-oriented defenses – denial, idealization, somatization, withdrawal, omnipotence; and c) mature defenses – humor, identification, altruism, suppression. The defenses that were excluded are: anticipation, affiliation, altruism, acting out, autosadism, conversion, counterphobia, displacement, dissociation, fantasy, hypochondriasis, isolation, rationalization, reaction formation, regression, repression, self-observation and sublimation.

The Defense Mechanism Inventory (Cramer, 1988, 1991b) was not included in the test battery as it only allows for the assessment of three psychodynamic defenses, namely, namely projection, denial and identification. This research was interested in exploring interactions between attachment and defense styles which are not measured by Cramer's defense inventory.

5.5.4.2 *Administration and scoring*

The CADS was administered to parents, legal guardians or caregivers (see appendix F.3). The respondent rated the extent to which a behavior is true of the child for each item, for example, "blaming others for mistakes" (projection), from 0 (not at all) to 3 (very much) (see appendix F.3 for the scoring sheet). The strength of each defense style (i.e. other-oriented, self-oriented and mature) is then calculated. This measure diminishes the influence of social desirability and children's cognitive capacity to report on psychological processes. However, a limitation of the CADS is that it measures observable behaviour rather than unconscious processes which may be different.

Furthermore, the accuracy of the information provided by the house parents is dependent on how well-known the children are to them.

5.5.4.3 *Cultural validity*

Information on the cultural validity of the CADS is not available; thus this study will contribute towards establishing evidence of its cultural validity in a more non-western, SA context.

5.5.4.4 *Psychometric properties*

The test-retest reliability of the three factors is strong and research has provided convergent and criterion-related validity (Wolmer, Laor, & Cicchetti, 2001).

5.5.5 Haworth's Analysis of Adaptive Mechanisms

5.5.5.1 *Development of the measure*

Haworth designed a schedule to analyze adaptive mechanisms or defenses in the Children's Apperception Test responses (Haworth, 1963) (see appendix G). However, her schedule has been applied to TAT responses in SA (Mathews & Bouwers, 2009; 2013). The schedule is comprised of three sections: a) defense mechanisms; b) phobic, immature or disorganized responses; and c) identification. I scored responses indicating phobic, immature or disorganized functioning to provide an overall indication of maturity of functioning. Overall maturity of functioning has not been calculated in previous research and was undertaken here to provide a more comprehensive understanding of the relationship between attachment and defense styles by specifically exploring the interaction between immature defenses and attachment.

5.5.5.2 *Administration and scoring*

Administration of the TAT was discussed in section 5.5.2.2 above.

To obtain a count for this variable, the TAT stories were read and a point was awarded when there was evidence of the following mechanisms: 'Fear and Anxiety', 'Regression', and 'Controls Weak or Absent' (Haworth, 1963). The cumulative score was then used in the analysis. According to Haworth, once a critical score is obtained for one or more of these mechanisms (for example, a critical score for 'Fear and Anxiety' is three), those mechanisms can be used to describe the child's overall functioning (Haworth, 1963). There is no upper limit to this variable although the lower limit is 0.

5.5.5.3 *Psychometric properties*

Psychometric information on Haworth's Analysis of Adaptive Mechanisms is not available although two SA studies have made use of this measure, thereby providing some evidence of the validity of this measure in the SA context (Mathews & Bouwers, 2009; 2013).

Given the absence of psychometric information, the psychometric properties of the TAT will be reported. The validity and reliability statistics of the TAT are comparable to other tests of psychological functioning and are reported as follows: interrater reliability between .80 and .86, test retest stability .45, and validity .22 for the themes Achievement Motivation and Spontaneous Achievement Behaviour (Meyer, 2004). Careful attention was given to the deliverance of instructions, as discussed in section 5.2.2.1, as TAT validity is strongly influenced by this (Allan, 1988).

The cultural validity of administering the TAT in a SA context was discussed in section 5.2.2.4 above.

5.5.6 Senior South African Individual Scale – Revised (SSAIS-R), Similarities subtest

5.5.6.1 *Introduction to the SSAIS-R*

The test battery was administered in English or Afrikaans, and both the ASCT and TAT required participants to narrate a story. This could have biased participants who were not first language English or Afrikaans speakers. Although the findings as to whether verbal competency is linked to attachment security are inconclusive (Main, Kaplan & Cassidy, 1985; Muris & Maas, 2004; Schuengel & Janssen, 2006; Zeanah & Gleason, 2010), the Similarities subtest of the SSAIS-R was administered to screen for verbal intellectual functioning in English and Afrikaans.

The SSAIS-R is one of the most frequently used tests to assess intelligence in SA children (Foxcroft, Paterson, Le Roux, & Herbst, 2004) and is similar to the Wechsler Intelligence Scale for Children (WISC) (Wechsler, 2004). The Similarities subtest score was used to screen for abstract reasoning as a proxy for intellectual capacity. This score was used as it is most closely related to the full-scale verbal IQ score, and in neurological cases is used as an index of premorbid intellectual functioning ().
The SSAIS-R is the preferred test used at the hospital site where data was collected; thus permission was obtained to use the Similarities results of participants from the hospital site to reduce time demands on participants.

The SSAIS-R is standardized for children whose home language is English or Afrikaans, and for those children who have been schooled in one of these languages for at least five years. However, the SSAIS-R has demonstrated reasonable reliability with children whose home language is not English but who show adequate skill in English (van Eden, 1997a). Attendance at an English or Afrikaans medium school for at least two years was therefore necessary to participate in the research. Thereafter, the SSAIS-R Similarities subtest allowed the researcher to identify and exclude potential participants whose English or Afrikaans skills were not adequately developed.

A limitation of the SSAIS-R is that test norms are not available for all eleven official languages in SA.

5.5.6.2 *Administration and scoring*

The children were asked to state in which way two items are similar, such as an 'apple' and an 'orange', and the response was given a score between one and three depending on its quality. For example, one if the response was 'they are both round' and three if the response was 'they are both fruit' (see appendix H). The cumulative score was then converted to a scaled score using a norm table for the SA population, thereby providing an indication of verbal functioning in comparison to peers of his/her chronological age. As the children in this study are from socially and economically disadvantaged backgrounds, the disadvantaged norms (Van Eden, 1997b) were used when scoring the Similarities subtest.

5.5.6.3 *Psychometric properties and cultural validity*

The SSAIS-R has demonstrated content and construct validity (van Eeden, 1997a). The reliability coefficients for the Similarities subtest for the ages eight to 12 years is above the accepted minimum of 0.70 (Bester, 2003). Furthermore, the test is the only test of intellectual functioning in SA children that has been classified and reviewed by the Psychometrics Committee of The SA Health Professional Board for Psychology (http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/psych/List_of_Classified_tests_Board_Notice_155_of_2017.pdf). SA norms are available and therefore it is considered a culturally valid test (van Eeden & Delene, 1992).

5.6 Procedure

Parents or legal guardians and their children from three different location types were invited to participate in the research; the locations being five children's homes, an outpatient psychology and psychiatry clinic, and an inner-city school. Before commencing with the research, ethical clearance

was obtained from the University of the Witwatersrand Medical Ethics Committee (clearance number M10561), the Chief Executive Officer (CEO) of Rahima Moosa Hospital (see appendix I.1), the Head of the psychology and psychiatry clinic (see appendix I.2), the Director or Social Work Manager at the children's homes (see appendix J), and the Principal of the inner-city school (see appendix K).

5.6.1 Hospital

The Head of the psychology and psychiatry unit at the hospital was approached and the purpose of the research explained. Written permission to conduct research on their premises was obtained from the CEO of the hospital and the head of the unit (see appendix I). All new parent-child dyads attending a first consultation at the hospitals were invited to participate in the research, either on that day or at a date convenient to them. The nature of the research was explained by the researcher (see appendices L.1 and L.2 for the parent information sheet and the child information sheet) and consent and assent forms (see appendices L.3 and L.4) signed.

5.6.2 Children's homes

The director or social work manager of the children's homes was approached and the purpose of the research explained. Written permission to conduct research on their premises was obtained (see appendix J).

Children in the homes were invited to participate. The nature of the research was explained by the researchers (see appendix M.1 child information sheet) and assent forms (see appendix M.2) signed. Children interested in participating in the study were interviewed after school. The test battery described below was administered to the children, and the CADS questionnaire administered to the children's house parent(s).

5.6.3 School

The principal of the inner-city school was approached and the purpose of the research explained. Written permission to conduct research on their premises was obtained (see appendix K).

Once permission had been obtained, Grade Two to Grade Six teachers were asked to hand out an information package to children aged between 8 and 12 years. This package included the participant information sheets (see appendices N.1 and N.2 for the parent information sheet and the child information sheet), consent and assent forms (see appendices N.3 and N.4), the demographics questionnaire, and the Comprehensive Assessment of Defense Styles. Scholars who returned signed consent and assent forms were interviewed at times made available by the principal when they were not engaged in academic activities. The test battery described below was then administered to the children.

5.6.4 Test battery

The instruments selected were influenced by the availability of instruments, time costs involved to the clinics and participants (children and parents or legal guardians), and the expertise of the researcher. The test battery took approximately an hour to administer. A demographics questionnaire and a collated 26-item CADS questionnaire was administered to the hospital and house parents, and sent home in a sealed envelope to the school parents. The demographics questionnaire (see appendix O) included questions about: a) who the child lives with; and b) who else the child has lived with and for how long. However, this information could not be used in the study as most of the answers were incomplete. Caregivers of children in children's homes were mostly unaware of this information. The parent's interview lasted approximately five minutes, and the interview with the child took between 50 minutes and an hour. The tests were administered to the children in the following order, namely: 1) the SSAIS-R Similarities subtest; 2) the ASCT; 3) the DES-IV; and 4) the TAT (8 cards). Two professional Masters-level students supervised by the

researcher assisted in collecting some data. The assistants were trained in the administration of the test battery by the researcher.

All the participants were administered the ASCT (*N* = 105). However, some of the measures not completed were as follows: a) 13 parents did not return the CADS (n = 92); b) one Similarities score was not obtained (n = 104); c) 17 of the children were not administered the TAT (n = 88) at the hospital site; and d) one DES had not been administered to a child (n = 104). The TAT was not administered by the researcher at the hospital site, as projective assessment forms part of the clinic's standard assessment battery completed during the psychometric assessment, and therefore the TAT was to be incorporated into the hospital's psychometric assessment. However due to an administrative error, 17 TATs were not administered. Thus, analyses were run only on the questionnaires that were completed.

5.7 Data Analysis

The variables in this study are attachment type (secure, avoidant, resistant-ambivalent, and disorganized), attachment complexity, attachment intensity, object relations, intensity of emotion, and defense styles.

5.7.1 Preliminary analyses

Descriptive statistics for the continuous variables (attachment, object relations, intensity of emotion, and defense styles) were calculated; specifically, the mean, standard deviation, minimum and maximum whilst the frequency count was given for the categorical variable, abstract reasoning. Pearson's Product-Moment coefficients were run to create an intercorrelation matrix showing interrelationships between attachment, object relations, intensity of emotion, and defense styles.

Whilst verbal skill has not been found to influence attachment security (Kerns at al., 2007), overall cognitive impairment as a potential confounding variable was controlled for as follows: a) Children from the clinic population with an IQ score indicating mild to severe intellectual disability were excluded from the study; and b) a two-way ANOVA with abstract reasoning as an independent variable was run to establish any effects between attachment and abstract reasoning on object relations. Object relations was chosen as the dependent variable, given that much of the debate around whether attachment and psychodynamic development converge pivots around the similarity or difference between internal working models and object relations. The potential effects of age were controlled by specifying an age cohort of eight to 12 years.

5.7.2 Main analyses

5.7.2.1 *Distribution of attachment in the sample*

Frequency counts were used to investigate the frequency of: a) attachment types; b) attachment intensity scores for each attachment type; and c) attachment complexity in the sample. A correspondence analysis was used to graphically illustrate relationships between attachment categories on the primary and secondary attachment level on a correspondence plot (Hair, Anderson, Tatham, & Black, 2010). To produce a biplot, an interdependence technique was used to graphically illustrate relationships between categorical variables. Two categorical variables were cross-tabulated and transformed to metric data, which were then represented visually. The relationship between variables placed in physical proximity to each other in the biplot are then interpreted.

5.7.2.2 *Attachment type, attachment intensity, and attachment complexity*

X^2 (Howell, 2011) were computed to assess the level of congruence between: a) primary and secondary attachment classifications; b) attachment types and attachment intensity scores; and c) attachment complexity and attachment intensity scores. Where there were attachment

classifications on more than one level (i.e. primary, secondary and/or tertiary), Pearson's Product-Moment correlations were run between attachment types to determine the likelihood of different attachment types being present in the same data set. Further to this, a repeated measures ANOVA (Hair et al., 2010) was conducted to investigate whether attachment intensity scores across attachment levels were significantly differentiated from each other. A repeated measures ANOVA can be run when there two or more attachment styles for participants.

5.7.2.3 *Interactions between attachment and internal world functioning*

Two-way ANOVAs (Howell, 2011) investigated the main and interaction effects of attachment and attachment complexity on the criterion or dependent variables, namely object relations, intensity of emotion, and defense styles. Interaction is represented by the combined effects of independent variables on the dependent variable. As attachment intensity is a continuous variable, General Linear Models (GLM) (MacNeil et al., 1996) will be conducted to analyze the main and interactive effects between attachment type and attachment intensity on the dependent variables cited above. For each ANOVA and GLM, significant interactions were analyzed first and if there were no significant interactions, the main effects were interpreted instead (Cohen & Cohen, 1983). The mean scores for significant results were also examined. Therefore, an interaction effect occurs when the influence of the categorical variable is dependent on the level of the continuous variable.

5.7.2.4 *Relations between attachment and object relations*

Any differences in the effect of secure versus insecure attachment classifications on object relations was investigated through the employment of a moderated multiple regression (Bedeian & Mossholder, 1994). This analysis investigated whether the effect of insecure attachments on object relations was moderated by or interacted with secure attachment elements.

5.7.3 Additional analyses

5.7.3.1 *Inter-rater reliability*

Given the scarcity of discussion on developmental manifestations of attachment patterns in middle childhood, a second coder with expertise in the field of attachment theory and child psychology scored 56 ASCT protocols (i.e. 53%) to establish inter-rater reliability. This is higher than the 33% reported in similar studies (Mossa et al., 2009). The table below indicates where there was agreement between the raters about the attachment classification and where there was disagreement; i.e. how many protocols were classified by both raters as secure, avoidant, ambivalent or disorganized, and where there was disagreement, what the alternate attachment classification given by the second rater was. For example, in the table below, the primary rater classified one protocol as secure whilst the second rater classified the same protocol as ambivalent.

Table 5.3

Inter-rater agreement

		Primary	**Rater**		
		Secure	Avoidant	Ambivalent	Disorganized
Second	Secure	**1**	0	0	0
Rater	Avoidant	0	**16**	2	0
	Ambivalent	1	3	**9**	2
	Disorganized	0	2	2	**18**

The simple percentage of agreement (the percentage of cases for which both raters gave the same rating) was 78.6%, which is reasonable. Bowker's test of symmetry (Bowker, 1948) was not significant (p = .78), thus the raters did not favour attachment categories differently.

Cohen's kappa coefficient is a statistical measure of inter-rater agreement for qualitative or categorical items, and corrects for inter-rater agreement which may occur merely by chance (Cohen,

1968). The unweighted kappa was reported, as the attachment categories are not ordinal. The estimate of the unweighted kappa is 0.68 (95% confidence interval). The estimate of 0.68 corresponds to 'substantial agreement' (Landis & Koch, 1977) between the raters with regards to classification of attachment type. The raters also discussed cases where there was agreement about the type of attachment, but differences with regard to the intensity of the attachment. In such cases, differences in attachment intensity of more than 1.5 points were discussed and an agreement reached, while differences of 1.5 and below were averaged as is practiced by Kerns and colleagues (Abtahi & Kerns, 2017; Kerns et al., 2011).

5.8 Ethical considerations

Ethical clearance to conduct the study was obtained from the Medical and Human Research Ethics Committee of the University of the Witwatersrand. Signed permission was also obtained from the various data collection sites.

While the participants are known to the researcher and/or research assistants, all participants were made aware that their responses are confidential, and that no identifying information will be included in the dissertation or publications that result there from. Thus, anonymity from all third parties is respected.

The protocols obtained from the study are stored in a safe, locked cupboard to which only the researcher has access, and are treated with strict ethical consideration for confidentiality. These will be kept for two years after the successful completion of the dissertation should publications arise, or six years if no publications arise; and then be destroyed.

All participants from the hospital, school and children's homes were informed that a summarized report on the findings of the research will be sent to them on completion of the study. The research supervisor's contact details were also available on the permission request letters, in case the sites

approached wished for further clarification from the university. Time costs and emotional demands were considered during the selection of the test battery to minimize the time required of both parents (including house parents) and children. The research assistants were trained in the appropriate administration of the questionnaires, and informed about counselling services available for parents who might wish to explore their relationship with their child. Interviews were administered with sensitivity for both the children and their parents or legal guardians.

If it was observed that any parent or guardian felt distress in response to the interview process, the parent or guardian would have been counseled into considering whether counseling would be useful for them. The research assistants were made aware of the counseling services offered within the unit or home, should parents or guardians wish to explore their relationship with their child further. However, none of the parents or guardians interviewed showed signs of distress. Although not anticipated, it was considered that some of the children may feel distress in response to some of the questions should underlying anxiety be evoked. If any distress was noted by the researchers, the interview process would have been terminated immediately, and it would have been recommended to the staff (at the clinic or home) or school parents that the child be assessed for counseling. The hospital staff indicated that should there be any distress, they would be able to counsel the children since they would see the children after the interview. However, none of the children (at any of the sites) were distressed during the interview process.

Further ethical considerations specific to the sites are discussed below.

5.8.1 Hospital

Given the large numbers of children seen at the stated clinic, time is a valuable clinic resource and the provision of services to the children and their families are primary. The researcher therefore designed a data collection procedure that would not disrupt the flow of the clinic. Consultation with hospital staff indicated that the intake of new patients usually takes around two hours, and that

parents and children are seen separately for part of this time. Thus, while the clinic staff conducted their standard interview with the child, the researcher interviewed the parents; and while the clinic staff interviewed the parents or legal guardians, as is routinely done, the researcher interviewed the child. It was considered that this method would minimize the emotional demands on participants, as it would form part of an already emotionally taxing process without requiring additional visits to the hospital.

Consultation around the practicality of the design with hospital staff indicated that they did not feel the process will be onerous for either themselves or for the participants. However, where families preferred to spread out this process, additional options were presented to the families. These options included: a) parents and children could complete the battery after the initial intake, once they returned for feedback and were waiting for an appointment; b) a parents could be interviewed while waiting for their children who were undertaking a psychometric assessment; or c) parents and children could complete the battery at a separate time and place convenient to them. Patients were made aware that receiving hospital treatment was not contingent on participating in the research.

Projective assessment and the SSAIS-R Similarities subtest forms part of the standard child psychometric assessment at the hospital. Psychological assessments are only administered by qualified clinical or counseling psychologists or intern psychologists in training at the clinic, thus these assessors had the requisite training and skill to administer the tests sensitively. The decision to use the TAT and Similarities results from the psychometric assessment was to minimize demands on participants as far as possible.

5.8.2 Schools and children's homes

The parent information sheet (see appendix N.1) indicated that the results of the SSAIS-R would be released to interested parents. However, no parents contacted the researcher for feedback.

No time costs were involved to the homes as the research was conducted outside of school hours or planned activities.

5.9 Conclusion

In conclusion, 105 children between the ages of 8 and 12 were accessed to explore the attachment of children at risk, and their internal world. To accomplish this, the ASCT (attachment), SCORS-G (quality of object relations), CADS and Haworth's Analysis of Adaptive Functioning (defences), DES-IV (intensity of emotions) and SSAIS-R Similarities subtest (verbal functioning) was administered to children from three data collection sites. As these are vulnerable children, ethical considerations strongly guided the research procedures followed. Once the data was collected, it was analyzed to answer the research questions.

Chapter Six: Results

Chapter six: Terms and acronyms

Instruments

ASCT - Attachment Story Completion Test

CADS - Comprehensive Assessment of Defense Style

DES-IV - Differential Emotions Scale IV

SCORS-G - Social Cognition and Object Relations Scale – Global Rating Method

SSAIS-R - Senior South African Individual Scale – Revised

TAT - Thematic Apperception Test

Study variables

AQR - Affective Quality of Representation

CRP - Complexity of Representation of People

EIR - Emotional Investment in Relationships

EMAI - Experience and Management of Aggressive Impulses

ICS - Identity and Coherence of Self

SE - Self Esteem

INE - Intensity of Negative Emotions

IPE - Intensity of Positive Emotions

OEI - Overall Intensity of Emotion

MD - Mature Defense Style

ID – Immature Defenses

OOD - Other-Oriented Defense Style

SOD - Self-Oriented Defense Style

AR - Abstract Reasoning

In this chapter the results from the study are described, and are grouped into a preliminary and main analysis. In the preliminary analysis, descriptive statistics for the study variables are presented. Additionally, this section explores the potential confounding effects of abstract reasoning as an indicator of intellectual capacity. In the main analysis, an analysis of how attachment is distributed in this sample is explored by investigating the prevalence of the four attachment types (secure, avoidant, ambivalent and disorganized). Following on from this, attachment type in relation to attachment complexity and attachment intensity is examined. Interactions between attachment, attachment complexity, primary attachment intensity, object relations, intensity of emotion and defense styles are statistically analyzed to understand the interplay between attachment and internal world functioning. Internal world functioning is comprised of object relations, intensity of emotions and defense styles. These variables, together with attachment make up the core variables in the study and are summarized in the table below. These analyses will answer the project's research questions. Finally, the core findings of the study are summarized.

To facilitate ease of reading, acronyms are written in full in each new section.

Table 6.1

Research variables

Variable	Type	Sub Variable	Categorical Variable	Continuous Variable
1. Attachment	a) Secure		✓	
	b) Avoidant		✓	
	c) Ambivalent		✓	
	d) Disorganized		✓	
2. Object Relations		a) Complexity of Representation of People		✓
		b) Affective Quality of Representation		✓
		c) Emotional Investment in Relationships		✓
		d) Experience and Management of Aggressive Impulses		✓
		e) Self-Esteem		✓
		f) Identity and Coherence of Self		✓
3. Attachment Complexity	Simple		✓	
	Complex		✓	

4. Attachment Intensity				✓
5. Abstract Reasoning	Low		✓	
	Average to High		✓	
6. Intensity of Emotion	a) Positive Emotionality			✓
	b) Negative Emotionality			✓
	c) Overall Emotionality			✓
7. Defense Styles	a) Other-Oriented Defenses			✓
	b) Self-Oriented Defenses			✓
	c) Mature Defenses			✓
	d) Immature Defenses			✓

A. PRELIMINARY ANALYSES

6.1 Descriptive statistics for study variables

Descriptive statistics for the continuous variables 1) attachment intensity, 2) quality of object relations, 3) intensity of emotion and 4) defense styles are presented below. The mean, standard deviation, minimum and maximum scores are indicated and, where applicable, frequency counts. Abstract reasoning is categorical and as such frequency counts for each category (i.e. Low and Average to High abstract reasoning skills) are given.

6.1.1 Attachment intensity

The means, standard deviations, minimum and maximum attachment intensity scores for each attachment type on the primary, secondary and tertiary level (as measured on a scale from 1 to 5) are indicated in table 6.2.

Table 6.2

Means and SDs of attachment intensity at the primary, secondary and tertiary level

Attachment type	n	Mean	SD	Min	Max
Primary Level					
Secure	7	3.71	0.57	3.0	4.50
Avoidant	39	3.97	0.51	3.0	5.0
Ambivalent	23	3.76	0.52	3.0	5.0
Disorganized	36	4.35	0.48	3.5	5.0
Secondary Level					
Secure	15	2.20	0.41	2.0	3.0
Avoidant	27	2.61	0.54	2.0	4.0
Ambivalent	20	2.38	0.63	1.5	4.0
Disorganized	12	2.42	0.51	2.0	3.0
Tertiary Level					
Secure	3	2.0	0	2.0	2.0
Avoidant	5	2.2	0.48	2.0	3.0
Ambivalent	12	2.0	0	2.0	2.0
Disorganized	4	2.0	0	2.0	2.0

At the primary level disorganized attachment had the highest mean intensity (4.35, *SD* = 0.48) and secure attachment the lowest mean intensity (3.71, *SD* = 0.57). The three insecure attachment

categories' range on the primary level spanned 3 to 5. On the secondary level avoidant attachment had the highest mean (2.61, *SD* = 0.54) and secure attachment the lowest mean (2.20, *SD* = 0.41). Both the secure and disorganized attachment groups had a very limited range on the secondary level (2 to 3) whilst the avoidant (2 to 4) and ambivalent (1.5 to 4) attachment group's range was greater. On the tertiary level the mean of the four attachment types was low (2 to 2.2) and the standard deviations 0 except for avoidant attachment, *SD* = 0.48. The avoidant attachment group was also the only tertiary level attachment type that had variability in the range (2 to 3). For the other attachment types there was no variability in the range.

The mean attachment intensity scores for primary, secondary and tertiary level attachments (irrespective of attachment type) are presented in table 6.3 below.

Table 6.3

Attachment intensity means for the primary, secondary and tertiary levels

Variable	N	Mean	Std Dev	Minimum	Maximum
Primary attachment	105	4.04	0.55	3.00	5.00
Secondary attachment	74	2.43	0.55	1.50	4.00
Tertiary attachment	24	2.04	0.21	2.00	3.00

While attachment levels are scored based on intensity and therefore the means for primary attachment will be higher than for secondary attachment, and similarly secondary means will be higher than for tertiary, the means for the three levels are indicated to ascertain variability in range across levels. Overall primary categories had an average intensity rating of 4.04 indicating clear resemblance to an attachment type, and a range of 3 to 5 (*SD* = 0.55). Secondary attachments on average evidenced a lower intensity rating with a mean of 2.43 and standard deviation of 0.55

although the range (1.5 to 4) was greater. Tertiary attachments were represented by one or two signs of an attachment pattern (*M* = 2.04, *SD* = 0.21) and the range was limited between 2 and 3.

6.1.2 Object relations

Descriptive statistics for the six Social Cognition and Object Relations Scale – Global Rating Method (SCORS-G) variables are presented in the table below.

Table 6.4

Mean and SDs for the object relations variables

Variable	Mean	Std Dev	Minimum	Maximum
Complexity of Representation of People	20.44	3.22	13.00	29.50
Affective Quality of Representation	24.44	4.02	10.00	32.00
Emotional Investment in Relationships	17.78	4.51	8.00	31.00
Experience and Management of Aggressive Impulses	26.15	3.94	16.00	34.00
Self Esteem	26.57	3.15	17.00	36.00
Identity and Coherence of Self	25.41	3.26	16.00	35.00

The maximum score that a participant could obtain on a scale was 56 although the sample range was eight to 36 which is well below the upper limit of the scales. The highest means were obtained for Self Esteem (SE) (*M* = 26.57, *SD* = 3.15) and Experience and Management of Aggressive Impulses (EMAI) (*M* = 26.15, *SD* = 3.94) although the ranges, 17 to 36 for SE and 16 to 34 for EMAI, were considerably lower than the upper limit of 56. The lowest means were for Emotional Investment in Relationships (EIR) (*M* = 17.78, *SD* = 4.51) followed by Complexity of Representation of People (CRP) (*M* = 20.44, *SD* = 3.22). The ranges for both EIR and CRP (8 to 31 and 13 to 29.5 respectively) were more limited than for SE and EMAI. The lowest minimum score and greatest standard deviation (*SD*

= 4.51) was for EIR whilst SE had the highest minimum score and smallest standard deviation (*SD* = 3.15).

6.1.3 Intensity of emotion

Intensity of emotion was grouped into three variables, namely:

- Positive Emotionality (IPE) – this is a composite of three scores obtained on the Differential Emotions Scale namely interest, enjoyment and surprise.
- Negative Emotionality (INE) – this is a composite of nine scores obtained on the Differential Emotions Scale, namely sadness, anger, disgust, contempt, fear, guilt, shame, shyness and hostility.
- Overall Emotionality (OEI) – the sum of Positive Emotionality and Negative Emotionality.

Table 6.5

Means and SDs for the intensity of emotion variables

Variable	Mean	Std Dev	Minimum	Maximum
Positive Emotionality	7.02	2.66	0	12
Negative Emotionality	16.04	7.33	0	34
Overall Emotionality	23.05	7.81	0	42

The mean for IPE was 7.02 (*SD* = 2.66) with a range of 0 to 12 indicating that the spread of scores on this subscale covered the entire possible range of scores (0 to 12). The mean for INE was 16.04 (*SD* = 7.33) and the range, 0 to 34, was close to the maximum possible range (0 to 36) attainable on this scale. The mean was considerably lower than the upper limit of the range (36). The mean for OEI was 23.05 (*SD* = 7.81) and the range of 0 to 42 close to the possible range of 0 to 46.

6.1.4 Defense styles

Results from the Comprehensive Assessment of Defense Styles (CADS) were grouped into Other-Oriented (OOD), Self-Oriented (SOD) and Mature Defense (MD) styles. The means and standard deviations are included in table 6.6 below.

Table 6.6

Means and SDs for defenses

Variable	Mean	Std Dev	Minimum	Maximum
Other-Oriented Defenses	7.46	2.77	1.5	12
Self-Oriented Defenses	8.39	2.55	3	13
Mature Defenses	6.55	2.31	1	11.5

The means for the three defense groups were, OOD 7.46 (*SD* = 2.77*)*, SOD 8.39 (*SD* = 2.55*)* and MD 6.55 (*SD* = 2.31*)*. The range for OOD was 1.5 to 12 which is well below the upper limit of 24 suggesting that mean defense scores were generally on the lower end. For SOD the range used in this sample was 3 to 13 while the possible range was 0 to 30. The possible range for MD was 0 to 24 although for this sample the maximum score (11.5) and mean (6.55) was on the lower end of the range. Thus results suggest that mean defense scores were generally on the lower end of the range. Thus this sample did not have very many defenses and therefore insufficient defenses to be organized into a specific defense style.

Immature Defenses (ID) was indicated by the composite score obtained for defenses indicating fearful, immature and/or disorganized functioning as measured by Haworth's Analysis of Adaptive Mechanisms. The mean for ID was low at 3.02 (*SD* = 2.72) and had a range of 0 to 11. There is no upper limit for this variable as there is no ceiling on the number of times defenses indicating fearful,

immature and/or disorganized functioning can appear in the TAT narratives although the lower limit is 0. The mean indicates that there were very few times the sample employed immature defences.

6.1.5 Abstract reasoning

The Similarities subtest of the SSAIS-R was used to classify participants with Low versus Average to High Abstract Reasoning (AR) skills. AR as a rudimentary indicator of intellectual functioning was used to screen those more intellectually able compared to those less intellectually sophisticated.

Table 6.7

Numbers of participants by AR levels

Attachment Type	**Average to High AR (n)**	**Low AR (n)**
Avoidant	37	2
Disorganized	26	9
Ambivalent	21	2
Secure	7	0
Total	91	13
%	88%	12%

It is notable that the majority of participants (88%) were rated with Average to High AR skills. Most of the participants with Low AR skills were also classified with disorganized attachment (9) while the whole secure attachment group was classified with Average to High AR skills.

6.2 What are the interrelationships between object relations, intensity of emotion, defense styles and primary attachment intensity in this sample?

The data were linear and normally distributed. This explorative research question was answered using the Pearson's Product-Moment coefficient. An intercorrelation matrix for all the above key variables and associated sub variables was run and reported on. No additional hypotheses were necessary given the explorative nature of this research question. The assumptions of correlations were considered and met, namely the data was normally distributed, linear and homoscedastic (Howell, 2011). The data from these variables are continuous and therefore interval. Please refer to the intercorrelation matrix table 6.8 on p.148.

6.2.1 Object relations

Identity and Coherence of Self (ICS) was significantly and positively related to Complexity of Representation of People (CRP) (r = .45, p < .01), Affective Quality of Representation (AQR) (r = .45, p < .01), Emotional Investment in Relationships (EIR) (r = .5, p < .01), Experience and Management of Aggressive Impulses (EMAI) (r = .35, p < .01) and Self Esteem (SE) (r = .7, p < .01). SE was also significantly related to AQR (r = .63, p < .01), EIR (r = .37, p < .01) and EMAI (r = .48, p < .01). EIR was significantly and positively related to CRP (r = .56, p < .01) and AQR to EMAI (r = .73, p < .01).

The object relation scales were not significantly related to intensity of emotion or defense styles. Immature Defenses (ID) was significantly inversely related to four of the object relations scales, namely, AQR (r = -.52, p < .01), EMAI (r = -.35, p < .01), SE (r = -.51, p < .01) and ICS (r = -.44, p < .01).

Table 6.8

Intercorrelation matrix

	CRP	AQR	EIR	EMAI	SE	ICS	IPE	INE	OEI	OOD	SOD	MD	ID
CRP								0.01	0.04	-0.21	-0.13	0.11	-0.06
AQR	0.06		0.19	0.73**				-0.08	-0.01	-0.11	0.01	0.20	-0.52**
EIR	0.56**							0.09	0.14	-0.07	0.11	0.16	-0.05
EMAI	0.04		0.16					-0.06	-0.03	-0.07	-0.14	0.05	0.35**
SE	0.19	0.63**	0.37**	0.48**				-0.19	-0.14	-0.05	0.06	0.14	-0.51**
ICS	0.45**	0.45**	0.5**	0.35**	0.7**			-0.10	-0.07	0.03	0.12	0.18	-0.44**
IPE	0.09	0.18	0.16	0.08	0.11	0.06	-	0.006	0.35 **	0.14	-0.02	0.16	0.06
INE									0.94**	0.02	0.06	-0.05	0.19
OEI										0.07	0.05	0.01	0.2*
OOD											0.52**	-0.21*	-0.12
SOD												0.15	-0.01
MD													-0.03
AI	-0.24*	-0.09	-0.23*	-0.10	-0.17	-0.3**		-0.11	-0.09	-0.17	-0.11	0.17	0.11

Note: * $p < 0.05$ ** $p < 0.01$

(The abbreviations used in the table above refer to the following study variables - CRP = Complexity of Representation of People, AQR = Affective Quality of Representation, EIR = Emotional Investment in Relationships, EMAI = Experience and Management of Aggressive Impulses, SE = Self Esteem, ICS = Identity and Coherence of Self, IPE = Intensity of Positive Emotions, INE = Intensity of Negative Emotions, OEI = Overall Emotional Intensity, OOD = Other Oriented Defenses, SOD = Self Oriented Defenses, MD = Mature Defenses, ID = Immature Defenses and AI = primary Attachment Intensity.)

6.2.2 Intensity of emotions

Overall Emotionality (OIE) was significantly positively related to Negative Emotionality (INE) (r = .94, p < .01) and Positive Emotionality (IPE) (r = .35, p < .01). INE and IPE were not significantly related to each other.

Intensity of emotion (that is, INE, IPE and OIE) was not significantly related to any of the CADS defense styles (namely, Other Oriented (OOD), Self-Oriented (SOD) and Mature Defenses (MD)). Immature Defenses (ID) was significantly positively related to OIE (r = .2, p < .01).

6.2.3 Defenses

ID was not significantly related to the CADS defense styles. Significant associations between ID and object relations, and intensity of emotion have been discussed above.

OOD was significantly positively related to SOD (r = .52, p < .01) and MD (r = -.21, p < .01). SOD and MD were not significantly related to each other. No other significant relations between defense styles and object relations, intensity of emotion, or ID were found.

6.2.4 Attachment intensity

Primary Attachment Intensity (AI) was not significantly related to intensity of emotion (that is, INE, IPE and OEI) or defense styles (OOD, SOD, MD or ID).

6.3 Abstract Reasoning as a Potential Covariate

6.3.1 Object relations

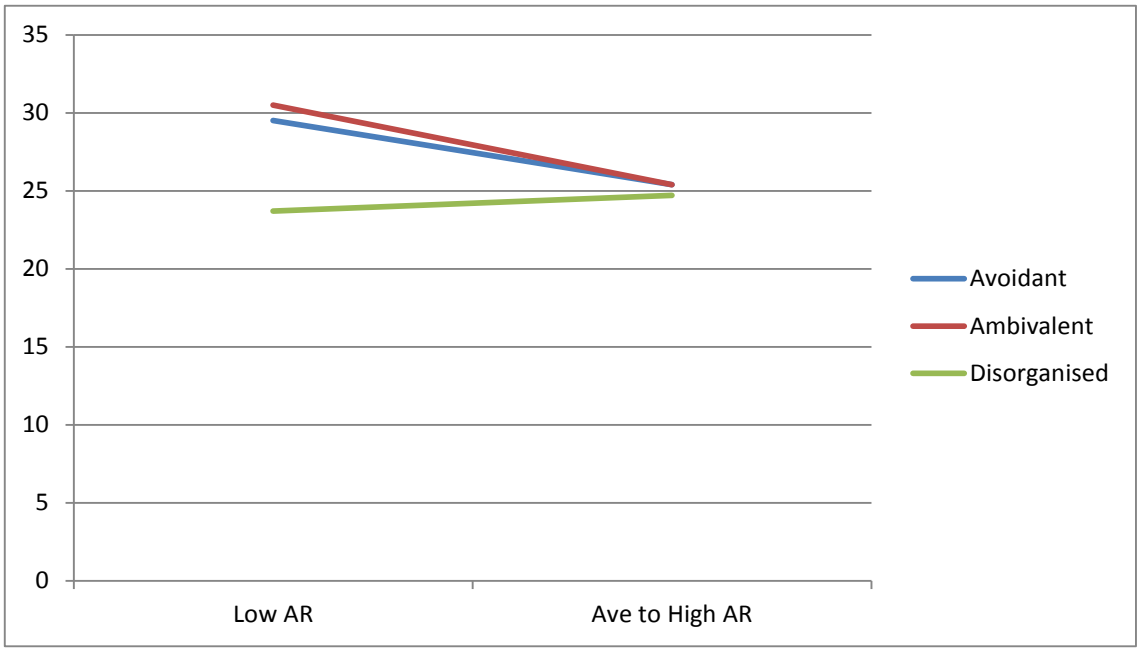
A series of two-way ANOVAs were run to investigate the possibility that abstract reasoning (AR) moderates the relationship between primary attachment type and object relations. The six SCORS-G object relations variables (Complexity of Representation of People (CRP), Affective Quality of

Representation (AQR), Emotional Investment in Relationships (EIR), Experience and Management of Aggressive Impulses (EMAI), Self-Esteem (SE) and Identity and Coherence of Self (ICS)) were the dependent variables. Each analysis is discussed below. The parametric assumptions of normality and homogeneity of variance were met. Refer to table 6.4 on p.143 for the means and standard deviations of the variables. As there were no participants classified with a primary secure attachment type who were also classified with Low AR skills, the secure attachment group was not included in the ANOVAs.

Of the six SCORS-G variables tested, the only overall model that was statistically significant was for ICS ($F_{(5, 77)} = 2.53$, $p = .04$). A significant main effect for AR ($F_{(1, 77)} = 5.60$, $p = .02$) and primary attachment type ($F_{(2, 77)} = 5.98$, $p = .004$) was found but as the interaction effect was significant, only the interaction effects will be interpreted. There was a statistically significant interaction between primary attachment type and AR ($F_{(2, 77)} = 3.94$, $p = .02$) (see Figure 6.1).

Figure 6.1

Interaction between primary attachment type and AR for ICS

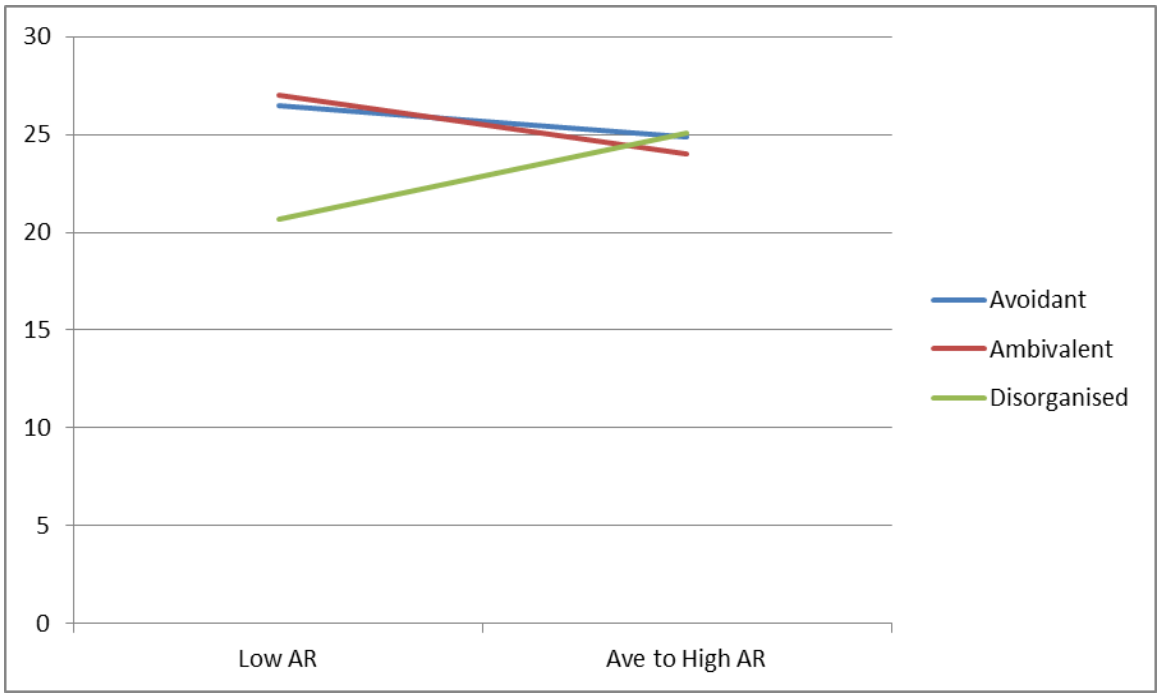


The interaction suggested that differences with ICS were greatest at low AR whereas in the presence of higher AR, there were no statistical mean differences in ICS as a function of attachment type. Post-hoc analysis using Tukey's HSD criterion, however, showed no significant differences. Tukey's post-hoc analysis offers a more conservative evaluation of significance. This result suggests that while AR may have an overall moderating effect, this effect is not marked enough to register as significant on this more conservative test.

The interaction between AR and primary attachment type was significant for AQR ($F_{(2, 78)} = 3.362$, $p = .04$), although there were no significant main effects for either AR ($F_{(1, 78)} = .002$, $p = .96$) or primary attachment type ($F_{(2, 78)} = 2.246$, $p = .11$). Figure 6.2 depicts the pattern of interaction.

Figure 6.2

Interaction between primary attachment type and AR for AQR



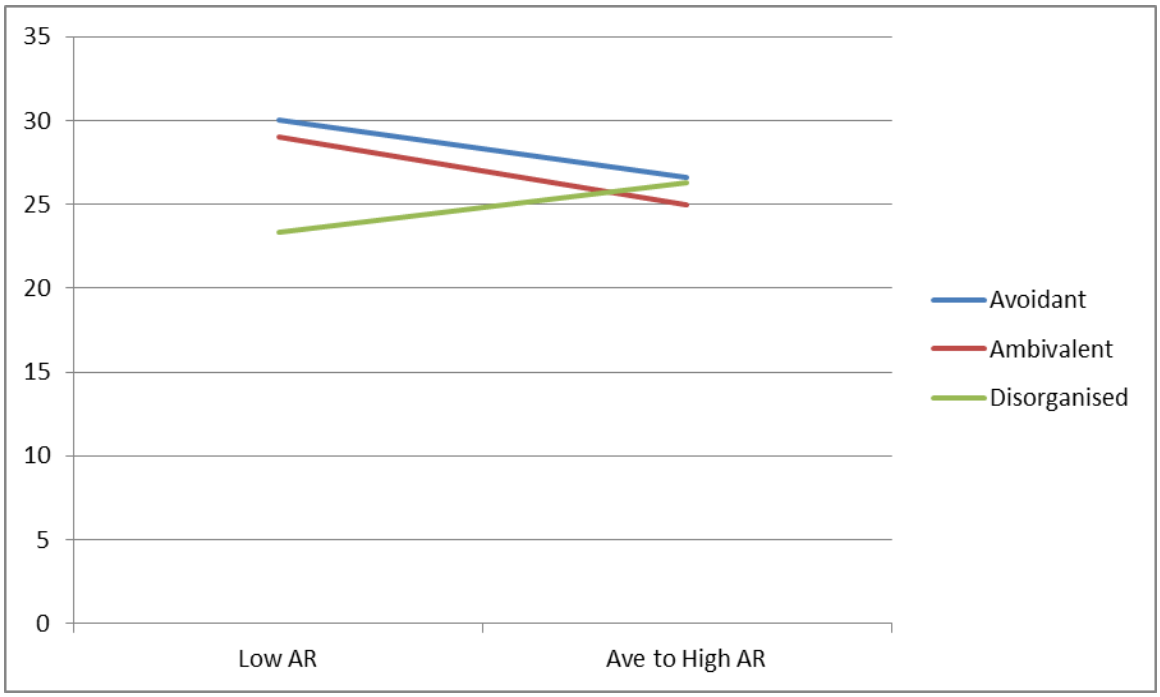
Again this interaction depicts that AQR differences in this sample existed only at lower levels of AR. At higher levels of AR, differential AQR levels based on attachment type disappeared. Post-hoc analysis using Tukey's HSD criterion, however, showed no significant differences. Tukey's post-hoc analysis offers a more conservative evaluation of significance. Thus while AR may act as a

moderator, particularly for disorganized attached children, this effect is not marked enough to register as significant on this more conservative test.

A significant interaction between AR and primary attachment type was found for EMAI ($F_{(2, 78)}$ = 3.594, p = .032). There were no significant main effects for AR ($F_{(1, 78)}$ = 2.795, P = .067) or for primary attachment type ($F_{(2, 78)}$ = 1.114, p = .294). Figure 6.3 depicts the interaction.

Figure 6.3

Interaction between primary attachment type and AR for EMAI



Avoidant children with Low AR ability showed slightly better EMAI (M = 30) than avoidant children with Average to High AR ability (M = 26.6). A similar difference emerged for ambivalent children with Low (M = 29) versus Average to High (M = 25) AR ability. In contrast, disorganized children with Low AR ability showed relatively lower EMAI (M = 23.3) but those with Average to High AR (M = 26.3) ability were on par or slightly higher than their avoidant or ambivalent counterparts. AR therefore potentially has different effects for disorganized versus ambivalent or avoidant children on EMAI. However, post-hoc analysis using Tukey's HSD criterion again showed no significant differences, suggesting that AR is not a strong moderator.

The overall model for SE was not significant (SE) ($F_{(5, 77)} = 1.79$, $p = .12$). A significant main effect was found for primary attachment type ($F_{(2, 77)} = 4.11$, $p = .02$), although post-hoc analysis showed no significance. This main effect is unrelated to AR and so is not interpreted here. No significance was found for CRP ($F_{(5, 78)} = 0.39$, $p = .86$) or for EIR ($F_{(5, 78)} = 1.08$, $p = .38$).

Overall, then, AR was ruled out as a covariate for the variables SE, CRP and EIR. Although initial analysis by way of 3 x 2 ANOVA suggested the possibility of AR as a covariate for the variables ICS, AQR and EMAI, closer analysis of the patterns of interaction, as well as consistently non-significant post-hoc analysis using Tukey's HSD criterion suggests that AR is unlikely to moderate the relationship between primary attachment type and the SCORS-G object relations variables.

Table 6.9

Means and SDs for AR, primary attachment type and object relations

Factor	Mean	Std Dev
Complexity of Representation of People		
Low AR	20.4	2.5
Ave to High AR	20.5	3.3
Avoidant	20.5	4.1
Ambivalent	20.3	3.0
Disorganized	20.0	1.7
Affective Quality of Relationships		
Low AR	22.5	4.6
Ave to High AR	24.8	3.8
Avoidant	25	4.2
Ambivalent	24.3	3.3
Disorganized	23.7	4.5
Emotional Investment in Relationships		
Low AR	18.5	5.2
Ave to High AR	17.7	4.4
Avoidant	17.4	5.0
Ambivalent	17.8	4.1
Disorganized	17.5	3.7
Experience and Management of Aggressive Impulses		
Low AR	25.2	5.1
Ave to High AR	26.3	3.7
Avoidant	26.8	3.5
Ambivalent	25.4	4.1
Disorganized	25.4	4.3
Self-Esteem		
Low AR	27.0	3.4
Ave to High AR	26.5	3.1
Avoidant	26.7	3.4
Ambivalent	27.1	2.8
Disorganized	25.6	3.0

Identity and Coherence of Self		
Low AR	25.6	4.5
Ave to High AR	25.4	3.0
Avoidant	25.6	3.8
Ambivalent	25.9	2.7
Disorganized	24.4	2.6

B. MAIN ANALYSES

In this section the manner in which attachment was distributed in a socially and economically disadvantaged South African sample was explored through testing the relations and interrelations between attachment type, attachment complexity and attachment intensity.

6.4 How is attachment distributed in a sample of socially and economically disadvantaged South African children?

In order to answer this broader research question, the following specific questions were explored:

6.4.1 Attachment types

a) What is the frequency of primary secure, avoidant, ambivalent and disorganized attachment types in this sample?

A frequency count was run to determine the incidence of primary attachment types. The frequencies of primary attachment types are presented in table 6.10 below.

Table 6.10

Frequency of primary attachment types

Attachment	N	%
Secure	7	7
Avoidant	39	37
Ambivalent	23	22
Disorganized	36	34

Avoidant was the most dominant attachment type at the primary level (37%, n = 39) with disorganized (34%, n = 36) and ambivalent (22%, n = 23) the second and third most representative categories respectively. Only 7% of the sample were found to be securely attached (n = 7).

6.4.2 Attachment complexity

a) What is the frequency of simple and complex attachments?

A frequency count was conducted to determine the frequency of simple and complex attachments.

Table 6.11

Complex attachment versus simple attachment

Attachment Complexity	Frequency	%
Simple	31	30
Complex:	74	70
Two Levels	52	49
Three Levels	22	21

Most participants were classified with a complex attachment (70%). The percentage of participants with a complex attachment that included two levels, i.e. participants who received a primary and secondary attachment classification, was 49%. The percentage of participants with a complex attachment that was comprised of three levels, i.e. participants who received a primary, secondary and tertiary attachment classification, was 21%.

b) Looking at complex attachment alone (i.e. at the secondary and tertiary attachment level), what is the frequency of attachment types?

A frequency count was run to determine the incidence of attachment types at the secondary and tertiary attachment levels.

Table 6.12

Frequencies of complex attachments

Attachment	**n**	**%**
Secondary level		
Secure	15	20
Avoidant	27	36
Ambivalent	20	27
Disorganized	12	16
Tertiary level		
Secure	3	12
Avoidant	5	21
Ambivalent	12	50
Disorganized	4	17

As with the primary level, avoidant attachment was the most dominant secondary attachment classification (36%, n = 27). A sizable portion of secondary classifications were ambivalent attachment (27%, n = 20). The most prevalent tertiary level attachment type was ambivalent (50%, n = 12) followed by avoidant (21%, n = 5). While only 7% of primary attachment types were secure (see table 6.12 above), it is noteworthy that more secondary (20%, n = 15) and tertiary (12%, n = 3) secure classifications were made.

c) What is the percentage of secondary classifications for each primary attachment type? In table 6.13 below the frequency of secondary classifications for each primary attachment type is indicated.

Table 6.13

Frequency of secondary classifications for each primary attachment type

Primary Attachment	**n**	**Total**	**%**
Secure	3	7	43
Avoidant	24	39	62
Ambivalent	19	23	83
Disorganized	28	36	78

The incidence of secondary classifications in the secure attachment group was relatively high: 43% of those who had a primary classification type of secure also obtained a secondary attachment classification of some type. The avoidant (62%), ambivalent (83%) and disorganized (78%) attachment categories had high to very high incidences of secondary attachment classifications with ambivalent attachment type having the highest.

d) What are the patterns for complex attachments in this sample?

Attachment patterns on the primary, secondary and tertiary levels are indicated in the table below.

Table 6.14

Complex attachments: Frequency of primary plus secondary attachments

Primary Level										
		Sec		**Avo**		**Amb**		**Dis**		**Total**	
		n	%	n	%	n	%	N	%	N	%
Secondary Level	**Sec**	-	**-**	**12**	**16**	2	3	1	1	15	20
	Avo	2	3	-	**-**	**11**	**15**	**14**	**19**	27	37
	Amb	1	1	6	8	-	**-**	**13**	**18**	20	27
	Dis	0	0	6	8	6	8	-	**-**	12	16
Total		3	4	24	32	19	26	28	38	74	100

From the table we see that the most prevalent complex attachment patterns were:

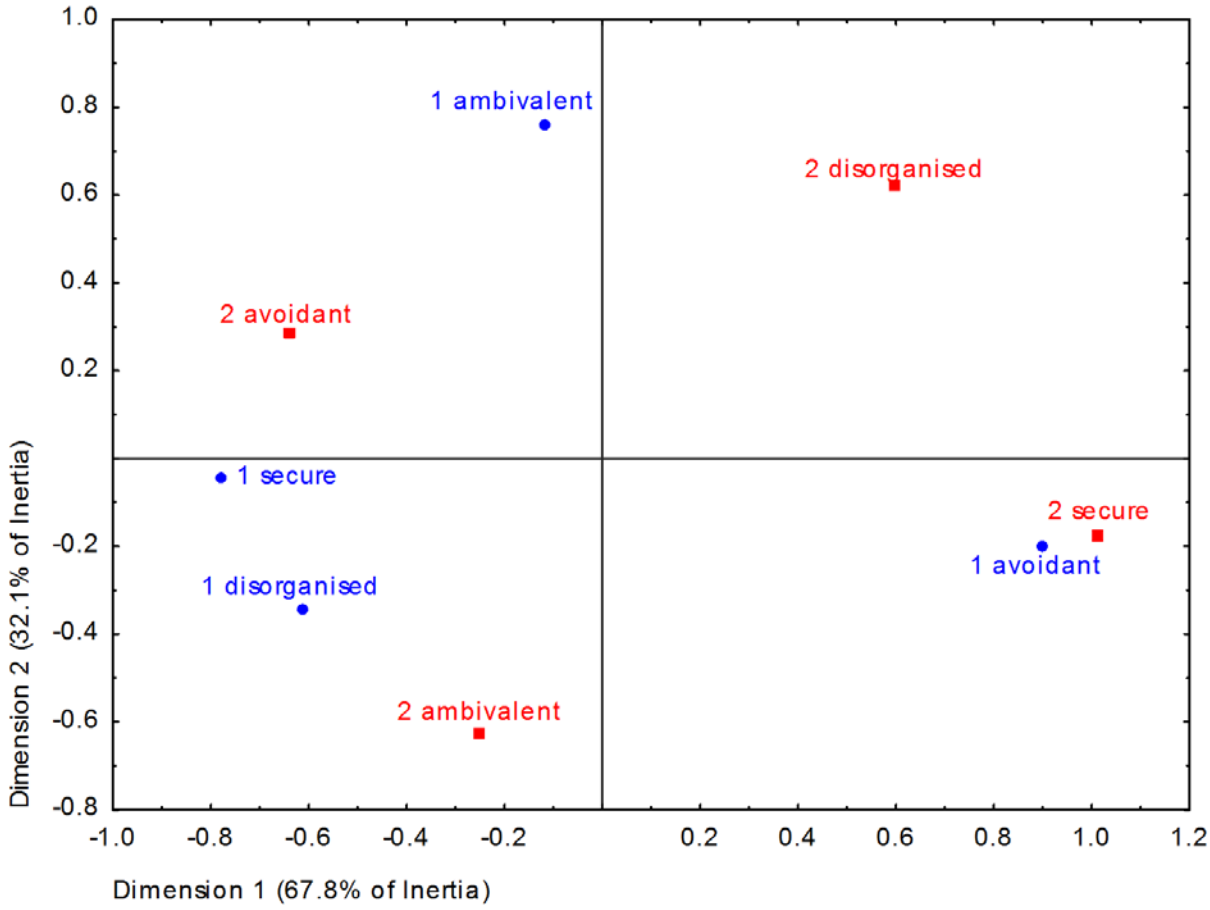
- Avoidant – Secure (n = 12, 16%)
- Ambivalent – Avoidant (n = 11, 15%)
- Disorganized – Avoidant (n = 14, 19%)
- Disorganized – Ambivalent (n = 13, 18%).

The primary secure attachment group was very small (n = 7) and within this group only three participants were given a secondary attachment classification. Of the secondary classifications given in the secure attachment group, none of the participants were given a secondary disorganized attachment classification. However, as the secure attachment sample was very small, the results should be interpreted with caution. In the primary avoidant attachment group, secure attachment was the most prevalent secondary attachment classification (n = 12) followed in equal proportion by ambivalent and disorganized attachment (n = 6). Participants with a primary ambivalent attachment who were also given a secondary attachment classification were most frequently given an avoidant attachment classification (n = 11), followed by disorganized attachment (n= 6) and then secure attachment (n = 2). The primary disorganized attachment group had the highest incidence of complex attachment patterns (38%). Both avoidant attachment (n = 14) and ambivalent attachment (n = 13) were prevalent secondary attachment classifications in this group. Only one participant with a primary disorganized attachment classification received a secondary secure attachment classification.

The relationship between attachment categories on the primary and secondary attachment level was mapped onto a correspondence plot (Hair, Black, Babin & Anderson, 2010). Figure 6.4 graphically and spatially illustrates the relationships between attachment types on the primary (indicated by 1) and secondary (indicated by 2) levels.

Figure 6.4

Complex Attachments: Correspondence plot for primary plus secondary attachment patterns



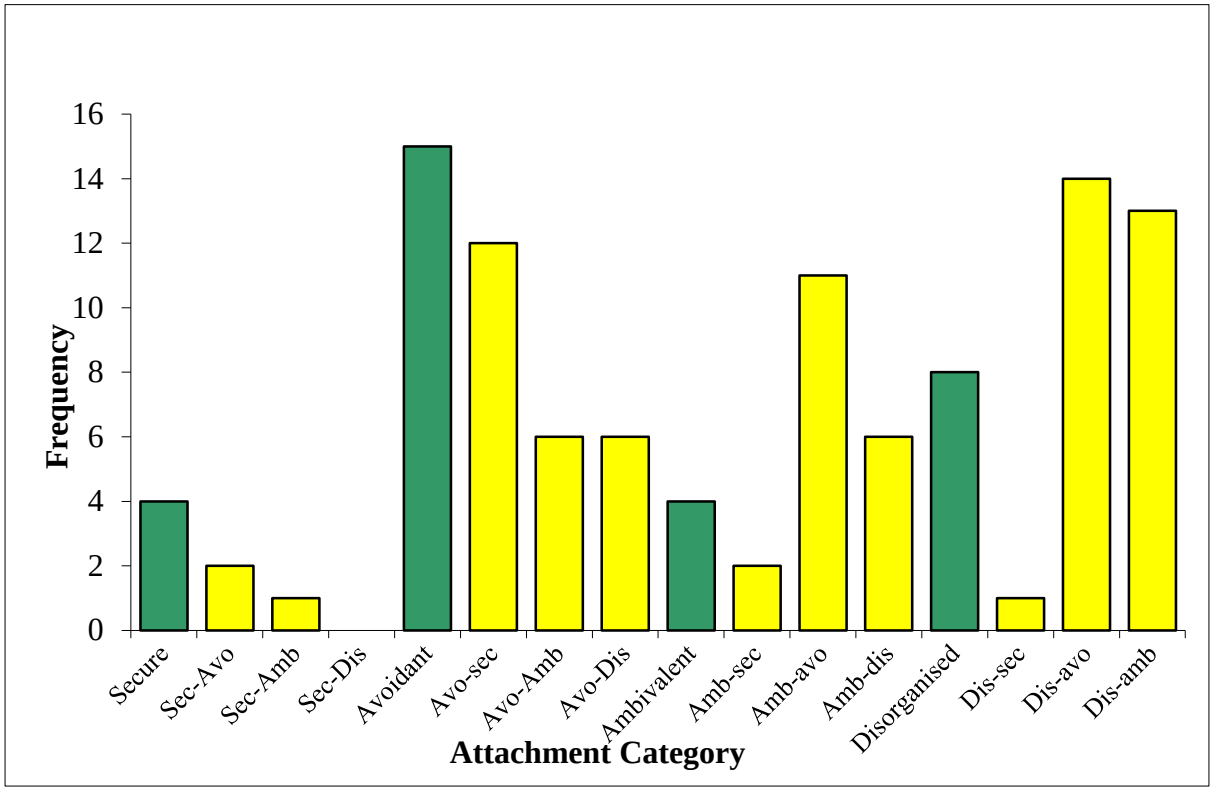
The two dimensions shown explain 99% of the variance in the categories. Association is evident between the following primary and secondary attachment types:

- Primary avoidant attachment and secondary secure attachment
- Primary disorganized attachment and secondary ambivalent attachment and
- Primary ambivalent attachment and secondary avoidant attachment.

The complex attachments formed from the combined primary and secondary attachment classifications are also graphically illustrated in the following bar chart.

Figure 6.5

Complex attachments: Primary plus secondary attachment groups



6.4.3 Attachment intensity

a) What is the frequency of primary attachment types for each primary attachment intensity score?

A frequency count was run to determine the frequency of primary attachment types for each attachment intensity score.

Table 6.15

Frequencies of primary attachment types by intensity scores

Attachment intensity Score	**Sec**		**Avo**		**Amb**		**Dis**		**Total**	
	n	%	n	%	n	%	n	%	N	%
3	2	29	6	15	6	26	0	0	14	13
3.5	1	14	0	0	1	4	1	3	3	3
4	**3**	**43**	**26**	**67**	**15**	**65**	**20**	**56**	**64**	**61**
4.5	1	14	4	10	0	0	4	11	9	9
5	0	0	3	8	1	4	11	31	15	14
Total	7	7	39	37	23	22	36	34	105	100

For primary attachment classifications, the range for primary attachment intensity was 3 to 5. The majority (61%) of primary attachments obtained an attachment intensity rating of 4 indicating clear resemblance to an attachment type. The incidence with which each primary attachment category obtained an intensity score of 4 was as follows: 43% of secure, 67% of avoidant, 65% of ambivalent and 56% of disorganized attachments. The percentage of participants rated 5 for the primary

attachment intensity score was very low except for disorganized attachment, with a relatively higher incidence of 31%. Thus the pattern for the disorganized attachment group was different to the pattern for the secure, avoidant and ambivalent attachment groups.

b) What is the distribution of mean primary attachment intensity for simple and complex attachments?

A frequency count was run to determine the frequencies of simple versus complex attachments for each attachment intensity score.

Table 6.16

Attachment intensity scores for simple and complex attachments

Attachment Intensity	**Simple Attachment**		**Complex Attachment**		**Total**	
	n	%	n	%	N	%
3	3	10	11	15	14	13
3.5	1	3	2	3	3	3
4	**16**	**52**	**48**	**65**	**64**	**61**
4.5	3	10	6	8	9	9
5	8	26	7	9	15	14
Total	31	30%	74	70%	105	100%

Most participants were classified with a complex attachment and primary attachment intensity rating of 4 (46% of the full sample or 65% of the complex attachment sample). The second most prevalent attachment intensity rating for complex attachments was 3 (10% of the full sample or 15% of the complex attachment sample). For the simple attachment sample, the most prevalent attachment intensity rating was also 4 (15% of the full sample or 52% of the simple attachment sample). Interestingly, 26% of the simple attachments and 9% of the complex attachments were given a prototypical attachment classification (i.e. received an intensity rating of 5).

6.4.4 Summary

In summary, the most prevalent attachment classification on the primary and secondary attachment level was avoidant (37% and 36% respectively). Children in this sample were also classified with a high incidence of disorganization (34%) and ambivalence (22%) on the primary attachment level. While only 7% of participants had a secure attachment classification on the primary level, this percentage increased on the secondary (20%) and tertiary level (12%). The incidence of secondary attachment classifications for each primary attachment type was (from highest to lowest): ambivalence (83%), disorganization (78%), avoidance (62%) and security (43%).

Thus most participants had a primary attachment classification complexified by a secondary attachment (70% of the sample). However, the incidence of three level complex attachments was much smaller (21%). The most prevalent two-level complex attachment patterns in this sample were: avoidant – secure (16%), ambivalent – avoidant (15%), disorganized –avoidant (19%) and disorganized – ambivalent (18%). Interestingly, no children classified with a primary secure attachment were also classified with a secondary disorganized attachment although the secure sample was very small (n = 7) and therefore any findings need to be interpreted with caution. Only one participant with a primary disorganized attachment received a secondary secure attachment classification.

The majority of participants did not present with a prototypical attachment type, i.e. the majority of participants did not receive a primary attachment intensity rating of 5. Sixty-one percent of the full sample obtained an attachment intensity rating of 4. However, disorganized attachment narratives were comparatively more prototypical compared to the other attachment categories. Prototypical attachment narratives were also slightly more common where the attachment was simple compared to complex. The most prevalent attachment pattern was a complex attachment with primary attachment intensity rating of 4 (i.e. 46% of the full sample).

6.5 What are the relations between the various attachment types, attachment complexity and attachment intensity?

Specifically, the following hypotheses were tested.

a) <u>There will be an association between primary and secondary attachment type.</u>

A chi-square test between primary and secondary attachment classifications was significant, $\aleph^2(9, N = 74) = 47.16$, $p < .0001$. These results indicate that there are significant associations between the primary and secondary attachment classification groups. Table 6.14 on p.159. indicates the frequencies with which primary and secondary attachment types clustered to form patterns. For example, primary disorganized attachment was associated with secondary avoidant attachment (19% of the clusters formed) and with secondary ambivalent attachment (18% of the clusters formed).

b) <u>There will be an association between primary attachment type and attachment intensity.</u>

A chi-square test of association indicated significant associations between attachment type and attachment intensity score, $\aleph^2$ (12, $N = 105$) = 27.35, $p = .007$. The results indicated that the distribution of attachment type by intensity level was significant, as illustrated in table

6.15 on p.163. For each attachment type, the most frequent primary attachment intensity rating was 4.

c) There will be an association between attachment complexity and primary attachment intensity.

Simple and complex attachments were not significantly associated with primary attachment intensity, $א^2$ (4, *N* = 105) = 5.24, *p* = .26. Thus the attachment intensity rating of the primary attachment type did not differ significantly if it was part of a simple or complex attachment.

d) There will be an association between attachment types as a function of attachment intensity.

A Pearson's Product-Moment correlation was run between attachment intensity ratings (on the primary, secondary and tertiary level) to explore association between security, avoidance, ambivalence, and disorganization in the data set. Table 6.17 below illustrates the relationship found between security, avoidance, ambivalence, and disorganization by correlating attachment intensity ratings on the primary, secondary and tertiary level for each data set. Attachment intensity ratings range between 1 and 5.

Table 6.17

Correlations between attachment types

	Ambivalent	Secure	Disorganized
Avoidant	-.41**	-.13	-.46**
Ambivalent		-.20*	-.07
Secure			-.32**

Note: * p < 0.05 ** p < 0.01

Some associations were found between ratings of security, avoidance, ambivalence, and disorganization. Children rated more avoidant were rated as less ambivalent (r = -.41, p < .01) and less disorganized (r = -.46, p < .01) indicating that avoidance is significantly inversely associated with ambivalence and disorganization. Children who were rated as more secure were rated as less ambivalent (r = -.20, p <.05) and disorganized (r = .32, p < .01). This indicates that children with secure attachment were not likely to have secondary ambivalent or disorganized attachment elements as well.

e) Attachment intensity will differ across attachment complexity levels.

Specifically, attachment intensity at the primary attachment level will be negatively correlated with intensity at the secondary and tertiary level. In addition, this is expected to be a linear relationship.

As previously indicated, most participants had a complex attachment (70% of this sample). In other words, most participants received a primary and secondary attachment classification. Some participants also received a tertiary attachment classification. It was therefore important to investigate whether primary, secondary and tertiary attachments are significantly differentiated from each other by the attachment intensity rating.

Table 6.18

Means of attachment intensity for primary, secondary and tertiary levels

Variable	N	Mean	Std Dev	Minimum	Maximum
Primary type	105	4.04	0.55	3.00	5.00
Secondary type	74	2.43	0.55	1.50	4.00
Tertiary type	24	2.04	0.21	2.00	3.00

Each primary attachment classification made received an intensity rating of 1 to 5 according to the ASCT guideline. Where an attachment classification was also made on the secondary or tertiary attachment level, an attachment intensity rating was also given. As there are potentially three levels of intensity, the data was stacked and a repeated measures ANOVA was run. The repeated measures approach accounts for differences across participants thereby ensuring that the assumption of independence is met. The assumptions of normality and homogeneity of variance were met (Howell, 2011). If the assumption of normal data distribution is not met a model can falsely indicate good or bad data fit (Kline, 2005). To control for this each measured variable was examined for skewness (disproportionate distribution at the low end) and kurtosis (disproportionate distribution at the peaks and tails) (Weston & Gore, 2006). Normality can be increased by transforming or deleting outliers (Weston & Gore, 2006). Homogeneity of variance within the groups was tested for by using Levene's test of homogeneity of variance (Howell, 2011).

The univariate ANOVA indicated significance, $F_{(2, 202)} = 271.97$, $p = < .0001$. The Wilk's Lambda will be reported as literature (O'brien & Kaiser, 1985) suggests that it is robust to violations of homogeneity of variance and normality, and is a conservative estimate of effect size.

$$\Lambda = 0.388, F_{(1,200)} = 315.22, p = <.0001.$$

A Tukey's Studentized Range (HSD) Post Hoc Test was run to explore the mean differences between attachment intensity ratings and the mean table is reported below.

Table 6.19

Differences between means across attachment levels

Intensity Comparison	**Differences between means**
Primary-Secondary	*1.606
Primary-Tertiary	*1.996
Secondary-Tertiary	*0.391

Note: * $p < 0.05$

The results indicated significant differences in intensity ratings between all three levels of attachment classifications. The attachment intensity rating for primary attachment was significantly higher than for a secondary attachment which in turn was significantly higher than for a tertiary attachment.

In summary, there was a significant association between primary and secondary attachments. Specifically, avoidant and secure attachments, and ambivalent and disorganized attachments were not significantly discreet in relation to each other. However, certain attachment types were significantly discreet from each other (i.e. avoidant attachment in relation to ambivalent and disorganized attachment and secure attachment in relation to ambivalent and disorganized attachment). Attachment was also significantly associated with primary attachment intensity. In other words, for each attachment type, the most frequent primary attachment intensity rating was 4. The mean attachment intensity of primary attachments did not differ significantly if it was a simple or complex attachment. Furthermore, primary attachment intensity ratings were significantly higher than secondary attachment intensity ratings which in turn were significantly higher than tertiary attachment intensity ratings.

6.6 Does attachment complexity moderate the relationship between primary attachment type, and object relations, intensity of emotion, and defense styles respectively, in the sample?

The parametric assumptions of independence, normality and homogeneity of variance were met throughout for the ANOVAS and GLMs (Howell, 2011; MacNeil et al., 1996).

6.6.1 Object relations

A series of two-way ANOVAs were run to investigate whether attachment complexity moderates the relationship between primary attachment type and quality of SCORS-G object relation scales. The six SCORS-G object relation scales (that is, Complexity of Representation of People (CRP), Affective Quality of Representation (AQR), Emotional Investment in Relationships (EIR), Experience and Management of Aggressive Impulses (EMAI), Self-Esteem (SE) and Identity and Coherence of Self (ICS)) were the dependent variables and attachment complexity and primary attachment type the independent variables. Each analysis is discussed below.

While the overall ANOVA was not significant for EMAI ($F_{(7, 87)} = 1.60$, $p = .15$, $N = 88$), a significant main effect was found for primary attachment type ($F_{(3, 87)} = 3.47$, $p = .02$). Children classified with primary secure attachment had a higher aggression regulation score ($M = 30.5$) relative to the insecure attachment categories ($M = 25.4$ for ambivalent and disorganized, and $M = 26.8$ for avoidant). Thus children with a disorganized or ambivalent attachment demonstrated the poorest capacity to regulate aggression. The insecure attachment categories had comparable levels of aggression regulation although children with an avoidant attachment ($M = 26.8$) were slightly better able to regulate aggression than children with an ambivalent or disorganized attachment.

Table 6.20

Descriptive statistics for attachment complexity, attachment type and EMAI

Factor	Mean	Std Dev
Simple attachment	26.3	5.0
Complex attachment	26.1	3.5
Secure	**30.5**	0.6
Avoidant	**26.8**	3.4
Ambivalent	**25.4**	4.1
Disorganized	**25.4**	4.3

However, post-hoc analysis using Tukey's HSD criterion showed no significant differences. Considering that there were only four observations for the secure attachment category, the possibility that the post-hoc test lacked sufficient power to detect this difference cannot be excluded. No significance was found for CRP ($F_{(7, 87)} = 0.94$, $p = .48$, $N = 88$), AQR ($F_{(7, 87)} = 0.37$, $p = .92$, $N = 88$), EIR ($F_{(7, 87)} = 1.63$, $p = .14$, $N = 88$), SE ($F_{(7, 86)} = 0.91$, $p = .50$, $N = 87$) or for ICS ($F_{(7, 86)} = 1.68$, $p = .13$, $N = 87$). The means and standard deviations are reported in table 6.21 below.

Table 6.21

Descriptive statistics for attachment complexity, primary attachment type and object relations

Factor	Mean	Std Dev
Complexity of Representation of People		
Simple attachment	20.3	3.7
Complex attachment	20.5	3.1
Secure	23.5	3.4

Avoidant	20.5	4.1
Ambivalent	20.3	3.0
Disorganized	20.0	1.7
Affective Quality of Relationships		
Simple attachment	24.4	4.1
Complex attachment	24.4	4.0
Secure	26.6	2.2
Avoidant	25.0	4.2
Ambivalent	24.3	3.3
Disorganized	23.7	4.5
Emotional Investment in Relationships		
Simple attachment	16.7	5.7
Complex attachment	18.2	3.9
Secure	23.0	5.5
Avoidant	17.4	5.0
Ambivalent	17.8	4.1
Disorganized	17.5	3.7
Self-Esteem		
Simple attachment	26.0	3.3
Complex attachment	26.8	3.1
Secure	28.8	1.3
Avoidant	26.7	3.4
Ambivalent	27.1	2.8

Disorganized	25.6	3.0
Identity and Coherence of Self		
Simple attachment	25.0	3.7
Complex attachment	25.6	3.1
Secure	28.3	3.3
Avoidant	25.6	3.8
Ambivalent	25.9	2.7
Disorganized	24.4	2.6

6.6.2 Intensity of emotion

A series of two-way ANOVAs were run to explore the possibility that attachment complexity moderates the relationship between primary attachment type and intensity of emotion. The three intensity of emotion variables (namely, Negative Emotionality (INE), Positive Emotionality (IPE) and Overall Emotionality (OIE)) were the dependent variables. Attachment complexity and primary attachment type were the independent variables. Each analysis is reported below. The means and standard deviations for the intensity of emotion variables are included in table 6.22 below.

The overall ANOVAs were not significant for IPE ($F_{(7, 97)} = 1.13$, $p = .35$), INE ($F_{(7, 97)} = 0.50$, $p = .84$) or OIE ($F_{(7, 97)} = 0.49$, $p = .84$). Thus there were no differences between the primary attachment type and attachment complexity groups in terms of the intensity of emotion variables. Neither primary attachment type nor attachment complexity was related to intensity of emotion.

Table 6.22

Descriptive statistics for attachment complexity, primary attachment type and intensity of emotion

Factor	Mean	Std Dev
Positive Intensity of emotion		
Simple attachment	6.5	2.6
Complex attachment	7.3	2.7
Secure	6.5	3.8
Avoidant	6.6	3.0
Ambivalent	7.3	2.6
Disorganized	7.3	2.0
Negative Intensity of emotion		
Simple attachment	16.2	7.2
Complex attachment	16.0	7.4
Secure	15.3	7.8
Avoidant	15.1	7.4
Ambivalent	15.4	8.2
Disorganized	17.6	6.6
Overall Emotionality		
Simple attachment	22.6	7.9
Complex attachment	23.2	7.8
Secure	21.8	7.2
Avoidant	21.7	8.2

Ambivalent	22.7	9.2
Disorganized	25.0	6.4

6.6.3 Defense styles

A series of two-way ANOVAs were run to explore the possibility that attachment complexity moderates the relationship between primary attachment type and defense styles. The three CADS (that is, Other Oriented Defenses (OOD), Self-Oriented Defenses (SOD) and Mature Defenses (MD)) and Haworth's Immature Defenses (ID) were the dependent variables, and attachment type and attachment complexity the independent variables. The means and standard deviations for ID are reported in table 6.23 below and for the CADS defense styles in table 6.24 (p.177). Each analysis is discussed below.

The overall ANOVA was not significant for any of the defense styles, namely OOD ($F_{(7, 84)} = 0.39$, $p = .90$), SOD ($F_{(7, 84)} = 0.96$, $p = .46$), MD ($F_{(7, 84)} = 0.81$, $p = .58$) or for ID ($F_{(7, 86)} = 1.65$, $p = .13$). There were no differences between the primary attachment type and attachment complexity groups in relation to any of the defense styles.

The dependent variable ID is count data and as is often the case with count data, there was evidence that the assumption of homogeneity of variance may have been violated. A square-root transformation was applied to the dependent variable data which remediated the problem.

Table 6.23

Descriptive statistics for attachment complexity, primary attachment type and I D

Factor	Mean	Std Dev
Simple attachment	2.6	2.7
Complex attachment	3.2	2.7
Secure	1.2	1.6
Avoidant	2.3	2.0
Ambivalent	3.2	2.8
Disorganized	4.0	3.2

Table 6.24

Descriptive statistics for attachment complexity, primary attachment type and defenses

Factor	Mean	Std Dev
Other Oriented Defenses		
Simple attachment	7.8	2.9
Complex attachment	7.3	2.7
Secure	7.5	2.0
Avoidant	7.6	3.1
Ambivalent	7.7	3.1
Disorganized	7.1	2.2
Self-Oriented Defenses		
Simple attachment	8.3	2.8

Complex attachment	8.4	2.5
Secure	9.3	1.8
Avoidant	8.1	2.7
Ambivalent	7.8	2.5
Disorganized	9.0	2.4
Mature Defenses		
Simple attachment	6.3	1.9
Complex attachment	6.7	2.5
Secure	7.5	2.6
Avoidant	6.4	2.3
Ambivalent	5.8	2.5
Disorganized	7.1	2.1

6.6.4 Summary.

A series of two-way ANOVAS were run to investigate the main effects of primary attachment type and attachment complexity as well as the interactive effects between these two groups in relation to each of the dependent variables. There were no differences between primary attachment type and attachment complexity groups in terms of the SCORS-G object relation scales, the DES-IV intensity of emotion variables and defense styles (i.e. the CADS defense styles and Haworth's immature defenses).

6.7 Does attachment intensity moderate the relationship between primary attachment type, and object relations, intensity of emotion, defense styles and attachment complexity respectively, in the sample?

6.7.1 Object relations

A series of two-way ANOVAS using GLMs were employed to investigate the likelihood that primary attachment intensity moderates the relationship between primary attachment type and object relations. The six SCORS-G object relation scales (namely, Complexity of Representation of People (CRP), Affective Quality of Representation (AQR), Emotional Investment in Relationships (EIR), Experience and Management of Aggressive Impulses (EMAI), Self-Esteem (SE) and Identity and Coherence of Self (ICS)) were the dependent variables and primary attachment type and primary attachment intensity the independent variables. Each analysis is reported below. The means and standard deviations are included in table 6.25 below.

Of the six SCORS-G variables tested, the only overall model that was statistically significant was for ICS ($F_{(7, 86)} = 2.47$, $p = .02$). However, as the main effects (primary attachment intensity, $F_{(1, 86)} = 0.16$, $p = .7$) (primary attachment type $F_{(3, 86)} = 1.63$, $p = .19$) and interaction between primary attachment type and primary attachment intensity ($F_{(3, 86)} = 1.85$, $p = .15$) was not significant, the model was not interpreted.

No significance was found for CRP ($F_{(7, 87)} = 1.84$, $p = .09$), AQR ($F_{(7, 87)} = 0.43$, $p = .88$), EIR ($F_{(7, 87)} = 2.03$, $p = .06$), EMAI ($F_{(7, 87)} = 1.17$, $p = .33$) or for SE ($F_{(7, 86)} = 0.85$, $p = .55$).

Thus, in this study, there were no moderating effects between primary attachment type and primary attachment intensity groups in terms of object relations.

Table 6.25

Descriptive statistics for primary attachment intensity, primary attachment type and object relations

Factor	**Mean**	**Std Dev**
Complexity of Representation of People		
Secure	23.5	3.4
Avoidant	20.5	4.1
Ambivalent	20.3	3.0
Disorganized	20.0	1.7
Affective Quality of Relationships		
Secure	26.6	2.2
Avoidant	25.0	4.2
Ambivalent	24.3	3.3
Disorganized	23.7	4.5
Emotional Investment in Relationships		
Secure	23.0	5.5
Avoidant	17.4	5.0
Ambivalent	17.8	4.1
Disorganized	17.5	3.7
Experience and Management of Aggressive Impulses		
Secure	30.5	0.6
Avoidant	26.8	3.4
Ambivalent	25.4	4.1

Disorganized	25.4	4.3
Self-Esteem		
Secure	28.8	1.3
Avoidant	26.7	3.4
Ambivalent	27.1	2.8
Disorganized	25.6	3.0
Identity and Coherence of Self		
Secure	28.3	3.3
Avoidant	25.6	3.8
Ambivalent	25.9	2.7
Disorganized	24.4	2.6

6.7.2 Attachment complexity

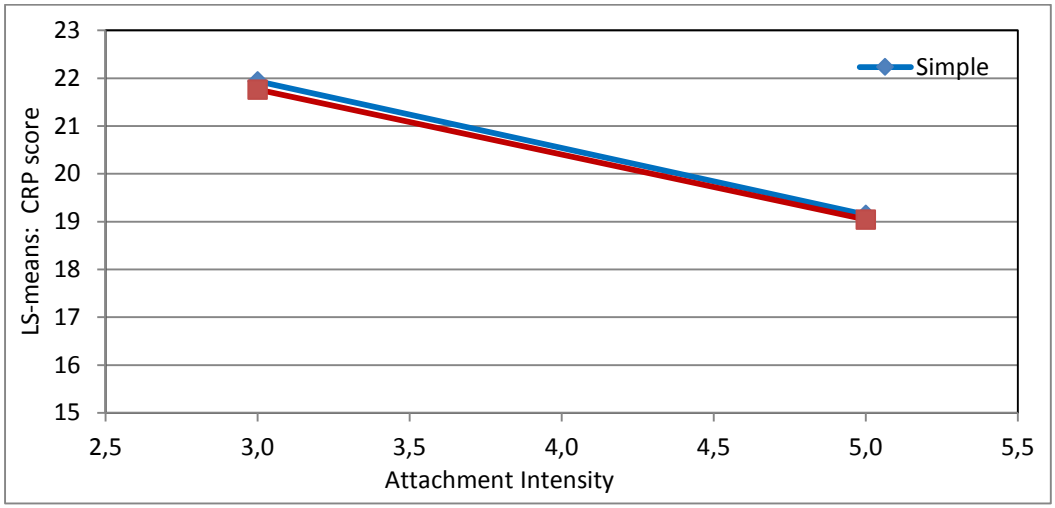
A series of two-way GLMs were conducted to test the relationship between primary attachment intensity, attachment complexity and object relations. The six object relations scales were the dependent variables and attachment complexity and primary attachment intensity the independent variables. Each analysis is discussed below.

CRP

The overall model for CRP ($F_{(3, 87)} = 1.76$, $p = .16$) was not significant. However, the main effect for primary attachment intensity was significant ($F_{(1, 87)} = 4.81$, $p = .03$).

Figure 6.6

CRP and primary attachment intensity



* 'Simple' refers to simple attachment and 'Complex' refers to complex attachment.

CRP decreased by 1.4 points for every 1-point increase in primary attachment intensity (bearing in mind that the range of primary attachment intensity only spanned two points). Thus an increase in attachment intensity was associated with lowered CRP. This effect is illustrated in the figure 6.6 above. The means and standard deviations for simple and complex attachments are included in table 6.26 and the primary attachment intensity scores for simple and complex attachments are reported in table 6.16 (p.164).

Table 6.26

Descriptive statistics for attachment complexity and CRP

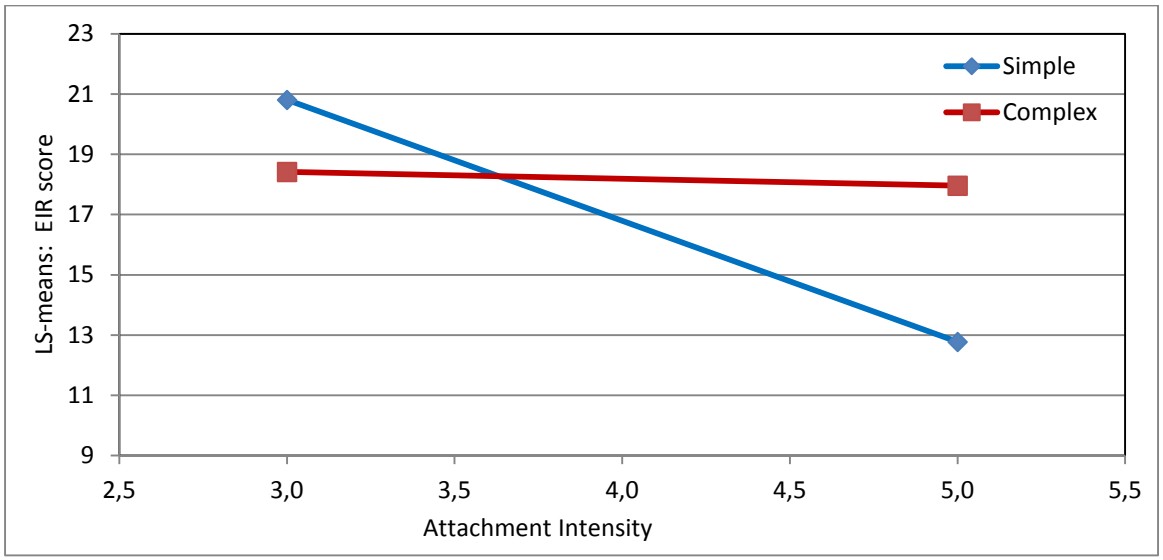
Factor	Mean	Std Dev
Simple attachment	20.3	3.7
Complex attachment	20.5	3.1

EIR

The overall model for EIR ($F_{(3, 86)}$ = 4.77, p = .004) was significant. A significant main effect for primary attachment intensity ($F_{(1, 86)}$ = 7.02, p = 0.01) and attachment complexity ($F_{(1, 86)}$ = 4.32, p = .02) was found but as the overall model is significant, only the interaction effects will be interpreted. There was a statistically significant interaction between attachment complexity and primary attachment intensity ($F_{(1, 86)}$ = 5.59, p = .01) (see figure 6.7). The means and standard deviations are reported in table 6.16 (p164).

Figure 6.7

Interaction between attachment complexity and primary attachment intensity for EIR



The figure illustrates that when the primary attachment intensity score was low (i.e. 3), predicted EIR was similar for both simple and complex attachments. However, as attachment intensity increases, EIR remains constant for complex attachments but decreases dramatically for simple attachments. Thus with complex attachments, attachment intensity does not influence capacity for EIR as it does with simple attachments. Furthermore, the figure illustrates that children in this sample with a simple attachment and high attachment intensity were the least invested in relationships.

Considering the standardized regression coefficients (see table 6.27 below), we see that the interaction effect is the largest, followed by attachment complexity and then attachment intensity. Thus the interaction between attachment complexity and primary attachment intensity had the largest effect on EIR followed by attachment complexity.

Table 6.27

Regression coefficients for EIR

Effect	Beta (ß)
Attachment complexity	1.435
Attachment intensity	-0.286
Attachment complexity * primary attachment intensity	-1.621

Table 6.28

Descriptive statistics for attachment complexity and EIR

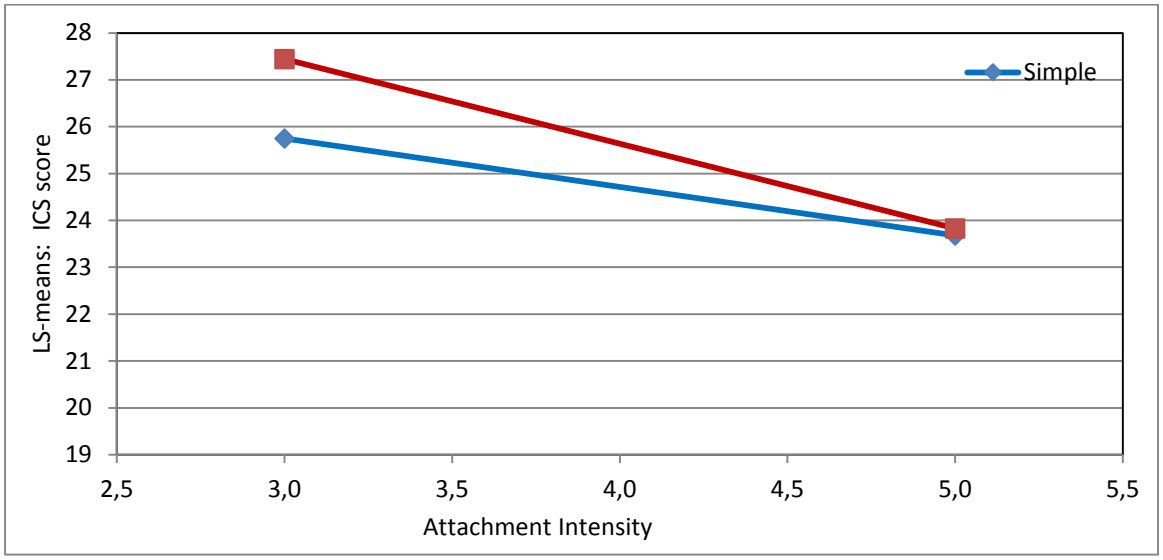
Factor	Mean	Std Dev
Simple attachment	16.7	5.7
Complex attachment	18.2	3.9

ICS

The overall model for ICS ($F_{(3, 84)} = 4.03$, $p = .01$) was significant. However, as the interaction between attachment complexity and primary attachment intensity was not significant, the significant main effect for attachment intensity ($F_{(1, 84)} = 6.54$, $p = .01$) will be interpreted. The means and standard deviations are included in table 6.16 (p.164).

Figure 6.8

Interaction between attachment complexity and primary attachment intensity for ICS



The figure illustrates that ICS decreased by 1.4 points for every 1-point increase in attachment intensity. Thus ICS weakened as attachment intensity increased.

Table 6.29

Descriptive statistics for attachment complexity and ICS

Factor	Mean	Std Dev
Simple attachment	25.0	3.7
Complex attachment	25.6	3.1

There was no significance for AQR ($F_{(3, 87)} = 0.23$, $p = .87$), EMAI ($F_{(3, 87)} = 0.30$, $p = .82$) and SE ($F_{(3, 86)} = 1.16$, $p = .33$). The means and standard deviations are included in table 6.30 below.

Table 6.30

Descriptive statistics for attachment complexity and object relations

Factor	Mean	Std Dev
Affective Quality of Relationships		
Simple attachment	24.4	4.1
Complex attachment	24.4	4.0
Experience and Management of Aggressive Impulses		
Simple attachment	26.3	5.0
Complex attachment	26.1	3.5
Self-Esteem		
Simple attachment	26.0	3.3
Complex attachment	26.8	3.1

6.7.3 Intensity of emotion

A series of two-way GLMs were employed to explore the possibility that primary attachment intensity moderates the relationship between primary attachment type and intensity of emotion. The three intensity of emotion variables (namely, Positive Emotionality (PE), Negative Emotionality (NE) and Overall Emotionality (OE)) were the dependent variables and primary attachment intensity and primary attachment type the independent variables. Each analysis is discussed below.

Of the three variables tested, the only overall model that was statistically significant was for PE ($F_{(7,104)} = 2.49$, $p = .02$). A significant main effect for primary attachment type ($F_{(3, 104)} = 4.64$, $p = 0.01$) was found but as the overall model was significant, only the interaction effects between primary attachment type and primary attachment intensity ($F_{(3, 104)} = 5.07$, $p = 0.003$) will be interpreted (see

figure 6.9). The means and standard deviations for primary attachment types in relation to IPE are indicated in the table below.

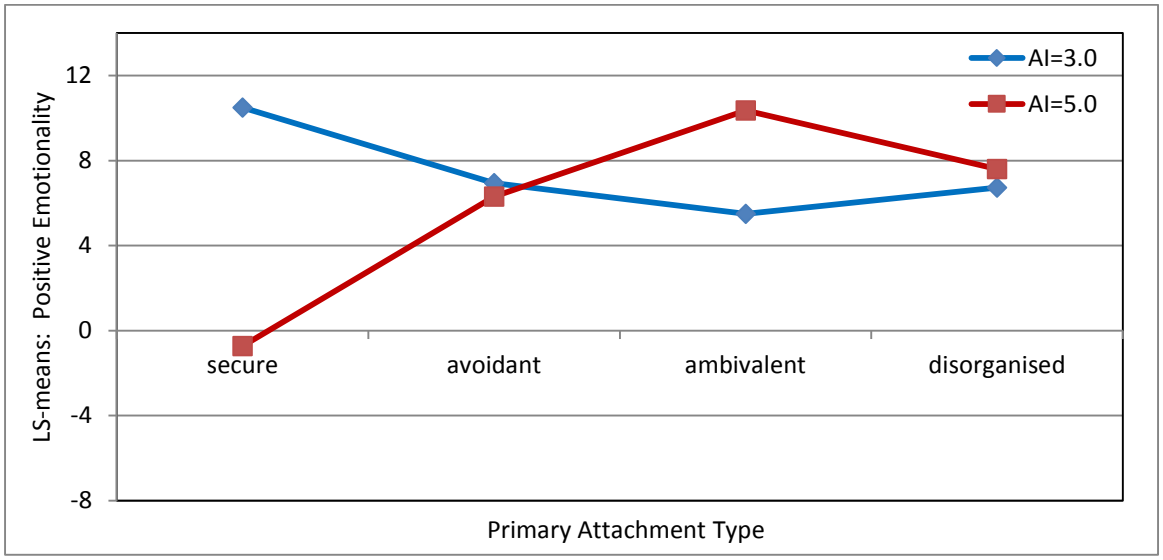
Table 6.31

Descriptive statistics for primary attachment type and PE

Factor	Mean	Std Dev
Secure	6.5	3.8
Avoidant	6.6	3.0
Ambivalent	7.3	2.6
Disorganized	7.3	2.0

Figure 6.9

Interaction between primary attachment type and primary attachment intensity for PE



* 'AI' refers to Attachment Intensity. The blue line indicates a primary attachment intensity of 3 and the red line indicates a primary attachment intensity of 5.

The interaction between primary attachment type and attachment intensity in relation to PE is most clearly illustrated when examining the interactions at the extreme ends of the attachment intensity

range, that is, when attachment intensity is 3 and when attachment intensity is 5. Children classified with a primary secure attachment type demonstrated much lower PE when attachment intensity was low compared to when it was high. However, the predictions have a large amount of error associated with them due to the small sample size of the secure attachment group (the confidence interval for the group was 3.0 to 10.00 and the mean 6.5). Children classified with a primary ambivalent attachment type showed increased PE when attachment intensity increased. The predicted PE score was similar for low and high attachment intensity when primary attachment type was avoidant or disorganized. The standardized regression coefficients in table 6.32 below indicate that for both secure and ambivalent attachment type the interaction effect is the largest, followed by the corresponding main effect. Thus attachment intensity moderates the relationship between attachment type and PE when the attachment is secure or ambivalent.

Table 6.32

Regression coefficients for PE

Effect	**Beta (ß)**
Secure	3.84
Avoidant	-0.58
Ambivalent	-3.22
Secure * primary attachment intensity	-4.47
Avoidant * primary attachment intensity	0.60
Ambivalent * primary attachment intensity	3.68

Note: Disorganized attachment is the reference category and therefore has a regression coefficient value of 0.

No significance was found for NE ($F_{(7,104)} = 1.52$, $p = .17$) or for OE ($F_{(7,104)} = 1.76$, $p = .10$). The means and standard deviations are indicated in table 6.33 on the next page.

Table 6.33

Descriptive statistics for primary attachment type and intensity of emotion

Factor	Mean	Std Dev
Negative Emotionality		
Secure	15.3	7.8
Avoidant	15.1	7.4
Ambivalent	15.4	8.2
Disorganized	17.6	6.6
Overall Emotionality		
Secure	21.8	7.2
Avoidant	21.7	8.2
Ambivalent	22.7	9.2
Disorganized	25.0	6.4

6.7.4 Defense styles

A series of two-way GLMs were run to investigate the possibility that primary attachment intensity moderates the relationship between primary attachment type and defense styles. The three CADS defense styles, namely, Self-Oriented Defenses (SOD), Other-Oriented Defenses (OOD) and Mature Defenses (MD) were the dependent variables, and primary attachment type and primary attachment intensity the independent variables. The means and standard deviations are included in table 6.34 on the next page.

No significance was found for SOD ($F_{(7, 91)}$ = 1.31, p = .26), OOD ($F_{(7, 91)}$ = 0.57, p = .78) and MD ($F_{(7, 91)}$ = 0.95, p = .47). Thus primary attachment type and primary attachment intensity, as well as the interactions between these groups, was not related to the CADS defense styles in this study.

Table 6.34

Descriptive statistics for attachment type and defenses

Factor	Mean	Std Dev
Self-Oriented Defenses		
Secure	9.3	1.8
Avoidant	8.1	2.7
Ambivalent	7.8	2.5
Disorganized	9.0	2.4
Other Oriented Defenses		
Secure	7.5	2.0
Avoidant	7.6	3.1
Ambivalent	7.7	3.1
Disorganized	7.1	2.2
Mature Defenses		
Secure	7.5	2.6
Avoidant	6.4	2.3
Ambivalent	5.8	2.5
Disorganized	7.1	2.1

A series of two-way GLMs were also conducted to examine the likelihood that primary attachment intensity moderates the relationship between primary attachment type and Immature Defenses (ID). ID was the dependent variable and primary attachment type and primary attachment intensity the independent variables. The means and standard deviations are reported in table 6.35.

The overall model was not significant ($F_{(7, 86)} = 2.04$, $p = .06$) for ID. Thus both primary attachment type and attachment intensity, and the interaction between these groups, do not effect ID as measured by items on the Haworth Analysis of Adaptive Mechanisms.

Table 6.35

Descriptive statistics for attachment type and ID

Factor	Mean	Std Dev
Secure	1.2	1.6
Avoidant	2.3	2.0
Ambivalent	3.2	2.8
Disorganized	4.0	3.2

6.7.5 Summary

A series of GLMs investigated the likelihood that attachment intensity moderates the relationship between primary attachment type and the following dependent variables, namely, object relations, intensity of emotion, defense styles and attachment complexity. The only overall models that were statistically significant were for Positive Emotionality (IPE), Emotional Investment in Relationships (EIR) and Identity and Coherence of Self (ICS).

For IPE, the results suggest that children classified with a primary secure attachment have much lower IPE when attachment intensity is low compared to when it was high. However, most

significantly, children classified with a primary ambivalent attachment showed increased IPE when attachment intensity increased (i.e. when the strength of ambivalence increased).

When attachment complexity and attachment intensity was used as the independent variables and object relations the dependent variables, two overall models were statistically significant, namely EIR and ICS. In terms of EIR, the interactive effects between attachment intensity and attachment complexity were significant. As attachment intensity increased for children with a simple attachment, EIR decreased. Interestingly, this effect was not found for children with a complex attachment. For ICS, the main effect for attachment intensity was significant and demonstrated that as attachment intensity increases, ICS weakens. While the overall model for CRP was not significant, the main effect for attachment intensity was significant. In other words, an increase in attachment intensity was associated with a decrease in CRP (similar to ICS).

6.8 What is the relationship between attachment and object relations?

Specifically, the following hypotheses were tested.

a) There will be significant correlations between attachment intensity and object relations. Pearson Product-Moment correlations were run to establish the relationship between primary secure, avoidant, ambivalent and disorganized attachment intensity and each of the SCORS-G object relation scales.

The Pearson Product-Moment correlation indicated significant positive correlations between primary secure attachment and the following object relation scales, namely: Complexity of Representation of People (CRP) ($r = .37$, $p < .01$), Emotional Investment in Relationships (EIR) ($r = .37$, $p < .01$) and Identity and Coherence of Self (ICS) ($r = .28$, $p < .01$). Thus securely attached children had better developed CRP and ICS, and greater EIR.

An inverse (negative) correlation was found between disorganized attachment and ICS (r = -.20, p < .05). Thus children with a disorganized attachment had lower ICS. All other correlations between avoidant, ambivalent and disorganized attachment and object relations were not significant (see table 6.36 below).

Table 6.36

SCORS-G object relation scales and primary attachment intensity

Object Relations Scale	**Secure**	**Avoidant**	**Ambivalent**	**Disorganized**
Complexity of Representation of People	.37**	-.01	-.06	-.17
Affective Quality of Representation	.12	.12	-.12	-.11
Emotional Investment in Relationships	.37**	-.18	.017	-.12
Experience and Management of Aggressive Impulses	.17	.08	-.15	-.16
Self Esteem	.15	.10	.02	-.17
Identity and Coherence of Self	.28**	.07	-.03	-.20*

Note: * p < 0.05 ** p < 0.01

b) Secondary and tertiary secure attachment elements moderate relations between primary insecure attachments and object relations.

Primary insecure attachments refer to primary avoidant, ambivalent and disorganized attachments classifications. A moderated multiple regression was conducted to predict quality of SCORS-G object relations from primary insecure attachments and secondary or tertiary secure attachments. In other words, do secondary or tertiary secure attachment elements moderate the effects of primary insecure attachments on object relations?

Pearson correlations between attachment intensity scores and object relations scores found significant positive correlations between primary secure attachments and CRP, EIR, and ICS (see table 6.36 above). Thus it was important to test if secondary or tertiary secure attachments (n = 15 and n = 3 respectively) would moderate relations between primary insecure attachments and object relations. The six SCORS-G object relation scales were the dependent variables. The assumption of normality was met for all the dependent variables whilst homogeneity was met for all except ICS; thus this finding needs to be interpreted with caution.

None of the models were significant (see table 6.37 below). The results indicated that there were no significant interactions between secondary or tertiary secure attachment elements and primary insecure attachments on quality of object relations. Thus secondary and tertiary secure attachment elements do not moderate the effects of primary insecure attachments on object relations.

Table 6.37

Interactions between secondary and tertiary secure attachments and primary insecure attachments

Factor	**t-value**	***P***
Complexity of Representation of People		
Secure-Avoidant	0.80	0.43
Secure-Ambivalent	-1.01	0.32
Secure-Disorganized	-0.73	0.47
Affective Quality of Representation		
Secure-Avoidant	0.16	0.87
Secure-Ambivalent	-0.73	0.47
Secure-Disorganized	0.86	0.40

Emotional Investment in Relationships		
Secure-Avoidant	0.45	0.65
Secure-Ambivalent	-0.68	0.50
Secure-Disorganized	-0.62	0.54
Experience and Management of Aggressive Impulses		
Secure-Avoidant	-1.41	0.16
Secure-Ambivalent	-0.99	0.33
Secure-Disorganized	0.64	0.52
Self Esteem		
Secure-Avoidant	-0.24	0.81
Secure-Ambivalent	-1.72	0.09
Secure-Disorganized	0.07	0.94
Identity and Coherence of Self		
Secure-Avoidant	-0.61	0.54
Secure-Ambivalent	-1.22	0.23
Secure-Disorganized	-0.03	0.97

In summary, secure attachment scores had a significant positive correlation with CRP, EIR and ICS. Thus children classified with a secure attachment demonstrated better CRP, ICS and greater EIR. However, a moderated multiple regression indicated that secondary and tertiary secure attachment elements did not moderate the effects of insecure attachments on object relations. The only insecure attachment to impact on any of the object relation scales was disorganized attachment.

Disorganized attachments were associated with less ICS compared to secure, ambivalent and avoidant attachments.

6.9 Summary

The findings from this study are limited to a sample of children in middle childhood between the ages of eight and twelve from socially and economically disadvantaged backgrounds in South Africa. Statistical analyses were conducted to answer the following research questions.

6.9.1. How is attachment distributed in a sample of socially and economically disadvantaged South African children?

The incidence of insecure attachments on the primary attachment level was very high: 93% insecure versus 7% secure. The insecure attachment types were represented as follows: avoidant (37%), disorganization (34%) and ambivalence (22%). Seventy percent of the sample had a complex attachment i.e. received a primary and a minimum secondary attachment classification. Twenty-one percent of the sample was given a secondary and tertiary attachment classification. The frequency of secondary attachment classifications for each attachment type was: ambivalence (83%), disorganization (78%), avoidance (62%) and security (43%). The most dominant two-level complex attachment patterns were: avoidant –secure (16%), ambivalent – avoidant (15%), disorganized – avoidant (19%) and disorganized – ambivalent (18%). Most of the children in the sample received a primary attachment intensity rating of 4 (i.e 61% of the sample), indicating clear resemblance to an attachment type. However, when also taking attachment complexity into account, the most common overall attachment pattern was a complex attachment with an attachment intensity rating of 4 (46% of the sample). Interestingly, disorganized attachment had the highest incidence of prototypical attachment ratings (i.e. received an attachment intensity score of 5).

6.9.2. What are the relations between the various attachment types, attachment complexity and attachment intensity?

A chi-square test found significant associations between primary and secondary attachment classifications. A Pearson's Product – Moment correlation indicated that certain attachment types were significantly discreet in relation to each other, i.e. avoidant and secure attachment in relation to ambivalent and disorganized attachment. It was noteworthy that avoidant attachment was not significantly discreet from secure attachment and ambivalent attachment was not significantly discreet from disorganized attachment. A repeated measures ANOVA indicated that primary attachment intensity was significantly higher than secondary attachment intensity which in turn was significantly higher than tertiary attachment intensity.

6.9.3. Does attachment complexity moderate the relation between primary attachment type and each of object relations, intensity of emotion and defense styles in the sample?

A series of two-way ANOVAS indicated that attachment complexity does not moderate the relationship between primary attachment type and object relations, intensity of emotion or defense styles.

6.9.4. Does primary attachment intensity moderate the relation between attachment type and each of object relations, intensity of emotion, defense styles and attachment complexity in the sample?

Attachment intensity did not moderate the relationship between attachment type and object relations, two of the intensity of emotion variables (namely, Negative Emotionality and Overall Emotionality) or defenses. The overall model for Positive Emotionality (PE) was significant ($F_{(7,104)}$ = 2.49, p = .02). Specifically, a significant interactive effect was found for security and ambivalence. Interestingly, for primary secure attachments, PE lowered as attachment intensity increased. For

primary ambivalent attachments the direction of this relationship was the reverse. An increase in attachment intensity was associated with an increase in PE.

Furthermore, attachment intensity was found to moderate the relationship between attachment complexity and object relations for the overall model, Emotional Investment in Relationships (EIR) ($F_{(3, 86)} = 4.77$, $p = .004$). Thus EIR decreased as attachment intensity increased for children with a simple attachment but not for children with a complex attachment. For Identity and Coherence of Self (ICS) ($F_{(1, 84)} = 6.54$, $p = .01$) and Complexity of Representation of People (CRP) ($F_{(1, 87)} = 4.81$, $p = .03$) the main effect for attachment intensity was significant, indicating that as attachment intensity increased, ICS and CRP decreased.

6.9.5. What are the relations between attachment and object relations?

Pearson Product – Moment correlations indicated that secure attachments were associated with better developed CRP, ICS, and increased EIR. However, secondary and tertiary secure attachment elements did not moderate the effects of primary insecure attachments on object relations. Disorganized attachments were associated with less ICS.

In the following chapters the findings from the study will be brought into dialogue with the literature, and the clinical and theoretical implications thereof carefully considered.

Chapter Seven: Discussion and Conclusions

Terms and acronyms: Chapter Seven

AQR - Affective Quality of Representations

ASCT - Attachment Story Completion Test

CADS - Comprehensive Assessment of Defense Style

CRP - Complexity of Representation of People

DES-IV - Differential Emotions Scale-IV

EIR - Emotional Investment in Relationships

EMAI - Experience and Management of Aggressive Impulses

ICS - Identity and Coherence of Self

IMW - Internal Working Models

SCORS - The Social Cognition and Object Relations Scale

SCORS-G - The Social Cognition and Object Relations Scale – Revised G

SE - Self-Esteem

The aims of the present study were two-fold: a) to investigate primary maternal attachment; and b) to empirically interrogate interaction between attachment and markers internal world functioning in a sample of eight- to twelve-year-old children from socially and economically impoverished backgrounds in SA. The discussion will commence by contextualizing the sample to provide the backdrop against which the study was conducted. Thereafter, the preliminary analyses will be explored before interpreting the main analyses. The context will be considered in the discussion of all the analyses.

This chapter will answer the research aims as follows: 1) describe the sample in terms of attachment, quality of object relations, intensity of emotion, and defense styles; 2) explore interrelations between attachment type, attachment complexity and attachment intensity; and 3) examine attachment in relation to internal world functioning, and reflect on whether these relationships are moderated by attachment complexity and/or attachment intensity. The results will be interrogated through dialogue with contemporary literature on attachment and the relationship between attachment and object relations, intensity of emotion and defense styles. Where possible, the results will be used to make informed hypotheses and/or deductions or inferences. Finally, the limitations of the study and recommendations for future research will be made.

7.1 Attachment in an Impoverished South African Sample

The children in this sample originate from deprived, disadvantaged backgrounds and most were exposed to violence, abuse and/or extreme forms of neglect. This necessitated either their placement in a children's' home (58% of the sample), or intervention through a community psychology clinic (31% of the sample). Thus, a large portion of the sample is characterized by a high incidence of disrupted attachments. Two of the cottages visited by the researcher were inhabited exclusively by children (boys and girls) who had been sexually abused. The investigation of attachment in institutionalized children - where Bowlby developed his theory - is an appropriate context to interrogate the contemporary links being argued for in the literature between attachment and object relations, intensity of emotion and defense styles. A small cohort of the sample (11%) comprised school children from an inner-city school. However, all the children are judged to be environmentally at-risk (Epps & Jackson, 2000), given their families' exposure to trauma (Tomlinson et al., 2005) and preoccupation with psychosocial stress in these impoverished contexts (Luby et al., 2013; Tomlinson et al., 2005).

7.1.1 Distribution of Attachment and Other Study Variables in the Sample

7.1.1.1 *Attachment types*

The incidence of primary insecure attachments was extremely high: 93% insecure versus 7% secure. This is far below the normative two-thirds security reported in nonclinical Western and non-Western societies (Ainsworth et al., 1978; Peterson, 2004), which includes South Africa (Mesman et al., 2016; van Ijzendoorn & Sagi, 1999; van Ijzendoorn & Sagi-Schwartz, 2008). Thus these research findings support the literature that socio-economic deprivation considerably compromises (van Ijzendoorn et al., 1999) and disrupts attachment security (Bowlby, 1979; Waters et al., 2000), impacting on the incidence of both avoidance and disorganization (Schmitt et al., 2004).

The high incidence of insecurity in the sample is unsurprising, despite being substantially higher than the global rate of 59% in similarly deprived contexts (van Ijzendoorn et al., 1999). Specifically, the insecure attachment rates for avoidance (37% compared to 19%) and disorganization (34% compared to 11%) are markedly higher, although the rate for ambivalence is less (22% compared to 29%) related to norms for similarly deprived contexts. Curiously, disorganization is the only attachment style where the incidence is higher in the general population, (i.e. between 15% and 21% (Gerhardt, 2015; van Ijzendoorn et al., 1999)), compared to the incidence in a deprived a context (i.e. 11%). This suggests that socio-economic deprivation has a greater influence on the prevalence of avoidant and ambivalent attachments than on disorganization which supports the literature (Peterson, 2004; van Ijzendoorn et al., 1999; van Ijzendoorn & Sagi-Schwartz, 2008).

However, the results from this study support previous findings that severe psychosocial hardship together with exposure to multiple traumas has a devastating influence on the prevalence of disorganization (25.8% in a previous SA study) (Pritchett et al., 2013; Tomlinson et al., 2005). One explanation may be that the Attachment Story Completion Test (ASCT) might be sensitive to detecting insecure and disorganized attachments, similar to the Reciprocal Attachment

Questionnaire (Wolfaardt & Joyce, 2005). An alternate explanation provided by the literature is that many of these children were exposed to maltreatment which resulted in the high incidence insecurity and disorganization found. Consequent to extreme environmental deprivation, many of the children in the study (58%) necessitated temporary institutional care at the time of testing. The literature reports the devastating impact of child maltreatment on the incidences of disorganization (51%) (Cyr, Euser, Bakermans-Kranenburg, & Van Ijzendoorn, 2010; Van Ijzendoorn, Bakermans-Kranenburg & Epstein, 2011) avoidance (28%), ambivalence (15%) (Gillibrand et al., 2011) and security (9%) (Van Ijzendoorn et al., 1999).

The results for insecurity from this study are remarkably like those of a recent study that explored attachment in temporarily institutionalized children during middle childhood in Italy (and is the only other known study to do so) (Zaccagnino et al., 2015). Insecurity was 91.3%, compared to 93% in this study, and similarly avoidance was the most prevalent insecure category. In longer-term institutionalized children, the range for disorganization increases dramatically, i.e. between 66% (Van Ijzendoorn & Bakermans-Kranenburg, 2010) and 80% (Zeanah & Smyke, 2008). These figures highlight the devastating impact on attachment security of institutionalization and the environmental factors necessitating such an intervention, and therefore help to account for the very high rates of insecurity and disorganization found in this study.

However, the school (11%) and clinic (31%) children had not been subject to the same psychosocial hardship. While insecurity in clinic samples are characteristically high (Shechtman & Dvir, 2006), a recent South African study of attachment in 446 young adults found 83% of the university sample to be insecurely attached, and most were classified with avoidant attachment (79.40%) (Seth, 2017). The impact of the broader context of socio-economic deprivation on attachment security was strikingly evident in Seth's research as financial difficulties experienced by families emerged as a theme. Unfortunately, socio-economic pressures are a hallmark of most South African families and is the impetus behind the current *#FeesMustFall* movement amongst students in this country

(https://mg.co.za/article/2016-10-10-feesmustfall-history-of-south-african-student-protests-reflects-inequalitys-grip). Nevertheless, it is important to bear in mind that the school, clinic and institutionalized children were not separated in the analysis so the potential impact of doing so on the reported patterns is not known.

Within an environmentally challenging environment, insecurity is thought to perform an adaptive function (Maego, 2013; Simpson & Belsky, 2008), with a tendency to become anxious-avoidant over time (Cicchetti, 1987) to avoid the distressing caregiver (Crowell & Treboux, 1995). Therefore, attachment behaviours primarily remain a way to regulate proximity to the caregiver to ensure survival. Thus, the findings point to the determining influence of the environment on attachment, which is the basic premise on which attachment theory was developed. And critically, the environment includes the context in which the maternal figure finds herself. It is noteworthy that while attachment theory foregrounds the importance of the environment (Bowlby, 1979), the environment that supports – or does not support - the nursing couple is scarcely considered.

In the Zaccagnino (2015) study, the rate of avoidance was substantially higher than this study (82.6% versus 37%) and no participants were classified as ambivalent. The authors question whether ambivalence is less common in middle childhood, which the results from this study dispute since 22% of participants were classified as ambivalent. However, the non-Western context of this study may account for the differences observed, as avoidance tends to be lower (van Ijzendoorn et al., 1999) and ambivalence higher (Pearce, 2009; Peterson, 2004; van Ijzendoorn et al., 1999) in collectivist societies. Although similar to Seth's results (2017), avoidant attachment was also the most frequently classified in this study, which is in contradiction to studies that report avoidance as less prevalent in non-Western societies (van Ijzendoorn et al., 1999). Thus, the distribution of attachment types across Western versus non-Western contexts remains inconclusive and may be more subject to environmental challenges, as suggested above.

Overall, the findings of this research contribute to the dearth of literature on attachment in non-Western communities exposed to socio-economic hardships and trauma (see Minde et al., 2006; Pritchett et al., 2013; Tomlinson et al., 2005; van Ijzendoorn & Sagi-Schwartz, 2008). In addition, this study contributes towards much-needed research on attachment in middle childhood (Douglas, 2011; Kerns, 2008, 2013; Kerns et al., 1996, 2000, 2001, 2006, 2007; Kerns & Brumariu, 2016; Miller, 2010; Plitt, 2013; Robinson, 2014).

7.1.1.2 *Attachment intensity*

The mean attachment intensity on the primary attachment level (*M* = 4.04) indicates that attachment in this sample tends to *resemble* a prototype of secure, avoidant, ambivalent or disorganized attachment rather than being prototypical of the type (Granot & Mayseless, 1999; Kerns, 2013). Thus, attachment in this sample is not fully differentiated although 4.04 is fairly high as an average. While disorganized attachment has the highest mean intensity (*M* = 4.35), it still indicates resemblance to the prototype rather than being representative of prototypical disorganized narratives. The lack of prototypical attachment types has also been reported in a clinical sample albeit in a young adult population but similarly, disorganized attachment had the highest mean score (Stein et al., 2011).

The range for primary attachment intensity spanned three (shows resemblance to the prototype) to five (prototypical of the attachment type). However, the uppermost limit for security was below this range at 4.5, while the lowest limit for disorganized attachment was higher at 3.5. On the secondary (*M* = 2.43) and tertiary attachment levels (*M*= *2*.04), only "elements of resemblance to the prototype" (Granot & Mayseless, 1999, p.23) were evident. Accordingly, while there are elements of secondary and tertiary attachment styles, there are many more elements of the primary attachment type in the ASCT narratives. The lack of clear differentiation of an attachment type may account for the high incidence of complex attachments found (i.e. 70%, discussed further in section 7.2).

Interestingly there is no descriptive data available in the literature on typical ASCT attachment ratings to compare these scores to.

7.1.1.3 *Object relations*

Overall, the quality of object relations in this sample is thin, flat and impoverished. Overall the sample is characterized by flat internal object relations, anger, perceptions of malevolence, mistrust, poor sense of self, and superficial representations of people.

Although this does not account for the whole sample, the findings are consistent with poor object quality in a young adult clinical sample (Stein et al., 2011) and with literature that reports the damaging impact of sexual (Ornduff, 1997; Ornduff, Centeno, & Kelsey, 1999; Ornduff & Kelsey, 1996) and physical abuse (Freedenfeld, Ornduff, & Kelsey, 1995) on the object relations of children, as measured by the Social Cognition and Object Relations scale (SCORS). Furthermore, the harmful effects of disrupted attachment, abuse and neglect on the object relations of latency aged children (Westen, Ludolph, Block, Wixom, & Wiss, 1990) has been supported by this study. Research has shown disrupted attachment, abuse and neglect to be reflected in the SCORS dimensions.

However, unlike previous research which found the cognitive dimension - CRP - less affected than the emotional dimensions - AQR and EIR (Ornduff, 1997; Ornduff & Kelsey, 1996) - functioning in both dimensions is severely compromised in this study. The two lowest mean scores obtained for the object relations scales were for CRP (*M* = 2.56) and capacity for EIR (*M* = 2.22).

7.1.1.4 *Intensity of emotion*

The means for the intensity of emotion variables are low and far below the uppermost limit of four: Positive Emotionality (*M* = 2.34), Negative Emotionality (*M* = 1.78), and Overall Emotionality (*M*= 1.92). In other words, the children in this sample tend to report low arousal of positive and particularly negative emotions. A score of one indicates that the positive (i.e. interest, enjoyment or surprise) or negative emotions (i.e. sadness, anger, disgust, contempt, fear, guilt, shame, shyness or

inwardly directed hostility) are 'hardly ever' experienced. A score of two indicates that the emotion is 'sometimes' experienced, and most of the children in this sample reported positive or negative emotions as sometimes felt. Positive or negative emotions were not 'often' or 'very often' experienced, as indicated by a score of three or four respectively.

However, the Differential Emotions Scale-IV (DES-IV) is a self-report questionnaire that was completed by the children with the assistance of the researcher. It is possible that many of these children, who have experienced neglect, abuse and/or abandonment, are not able to accurately identify and rate their feelings (Bion, 1963; Youngstrom & Green, 2003) or, as indicated by the very high prevalence of avoidant attachment (37%), have primarily learnt to dismiss their feelings. According to Youngstrom and Green, self-reported levels of emotion in low socio-economic groups are not reliable. Thus the need to identify alternate means of rating emotional intensity in children from low socio-economic environments is indicated. According to Muhati-Nyakundi and colleagues (2017), vulnerable and orphaned children in sub-Saharan Africa are under researched due to the lack of appropriate research tools for this group. They advocate the use of visual stimuli and projective techniques to elicit more accurate information. The findings also support the literature that low emotional arousal is favoured in collectivist cultures (Lim, 2016). Thus while intense emotions may be experienced, low arousal is reported.

7.1.1.5 *Defense style*

As with object relations and intensity of emotion, the means for defense styles are on the lower end of the range (i.e. 0 to 3); namely: Other-Oriented Defenses: *M* = 1.87, Self-Oriented Defenses: *M* =1.68, and Mature Defenses: *M* = 1.64. The mean for Immature Defenses was 3.02, indicating a high incidence of anxiety and fear, regression, and/or loosening of ties to reality (Haworth, 1963). Young school children referred for emotional problems have been shown to have significantly more indicators of regression and loosening of ties to reality than control groups (Haworth, 1963).

The overall findings suggest that defense strategies are not adequately developed to bind anxiety in this sample. The development of defences are influenced by factors such as maltreatment in childhood (Coulacoglou, 2008).

However, in 58% of the sample, the Comprehensive Assessment of Defense Style (CADS) questionnaire was completed by caregivers who might not have known the children well, because: a) the children had not been in their care for long; b) their knowledge of the child was limited, as each caregiver had many children to watch over (approximately 15 children to one or two caregivers); or c) the caregiver did not have a good relationship with the child. These are inherent difficulties in researching a population of children who are not well known to their caregivers, and this raises questions around best practice in researching this population. This question will be considered again in the 'Limitations and Directions for Future Research' section (see Section 7.3.3). While this helps to account for most of the sample, the inadequate development of defense strategies was observed across the sample of children from socio-economically deprived contexts.

7.1.1.6 *Summary*

Although the sample was drawn specifically from the lower socio-economic strata with greater exposure to environmental stressors and less resources available, most South African children live in relative poverty (i.e. around 62.2 %) (Hall & Sambu, 2017b). The children in this study are characterized by clear resemblance to an attachment pattern rather than a prototypical attachment type; and by poorly developed object relations, inadequate defense styles, low emotional arousal (particularly for negative emotions) and extremely low maturity of functioning. Thus, the environmental deprivation experienced by the children in the sample is clearly reflected in the paucity of differentiation and their impoverished internal worlds. These children tend to have very poor interpersonal relationships, poor strategies for regulating emotions, are impulsive and have poorly developed coping skills.

Furthermore, the results highlight the importance of using measures sensitive to cultural norms (such as controlling for the tendency to report low emotional arousal in collectivist cultures) and the determining role of context when identifying appropriate methodologies for studies. Most of the children in this study could not describe their emotions and were not well known to their caregivers, indicating that projective measures are perhaps preferable to measures dependent on self-report (by children or caregivers).

7.1.2 Attachment as a Complex Construct in the Sample

The most common overall attachment classification was a complex attachment (70% of the sample) with a Primary Attachment Intensity rating of 4 (61% of the sample). The findings suggest that, as with the object relations in a sample of deprived children, a differentiated attachment type is not fully developed in this sample. Rather, attachment tends to reflect resemblance to an attachment type and includes elements of secondary and / or tertiary attachment styles.

Rater hesitation to score a prototypical presentation must also be considered. It is possible that raters in this study were more confident to rate a prototypical disorganized classification, as the pattern for this group (31% were prototypical) was different to the pattern for the secure, avoidant and ambivalent attachment groups (0%, 8% and 4% were prototypical respectively). Conversely, there may have been more hesitation to classify someone as disorganized unless it was prototypically disorganized (compared to classifying secure, avoidant or ambivalent attachments). However, this general lack of discreet differentiation is not particular to this sample (Stein et al., 2011). Alternatively, the findings might indicate that not only is attachment not fully developed, but different attachment strategies are drawn upon in response to environmental challenges. Further to this, attachment as a theoretical construct might not be as clear-cut as conceptualized to date.

The children in the study drew on alternative attachment strategies at times, as illustrated by the high incidence of secondary and tertiary maternal attachment elements in their ASCT narratives.

Primary attachment classifications are complexified by secondary attachments, which in turn are complexified by tertiary attachments. The frequency of secondary attachment classifications for each primary attachment type was, from highest to lowest: ambivalence (83%), disorganization (78%), avoidance (62%) and security (43%). On the secondary and tertiary levels, the most common attachment classifications were avoidance (36% and 21% respectively) and ambivalence (27% and 50% respectively). The implication of this finding is that the children tend to develop more than one strategy within a maternal relationship, for example, both an avoidant and a secure strategy. This finding supports the limited empirical research available (van Ijzendoorn et al., 1999) and the argument developed in chapter two that primary attachments might be more complex and fluid than originally conceptualized. It is important to note that the instrument used -the ASCT- allows for the identification and classification of more than one primary attachment strategy in participants. Thus it is possible that this finding might not be unique to this context and therefore needs to be researched in better resourced contexts.

In this sample, complex attachment constructs clustered into specific patterns. The most prevalent groups were: avoidant – secure (n = 12, 16.22%), ambivalent – avoidant (n = 11, 14.86%), disorganized – avoidant, (n = 14, 18.92%) and disorganized – ambivalent (n = 13, 17.57%). The prevalence of attachment clusters adds to the limited literature reporting this phenomenon (van Ijzendoorn et al., 1999). Disorganization was also the primary category in the clusters reported in the study by van Ijzendoorn et al.

Crittenden (1988) originally identified an avoidant-ambivalent pattern in maltreated children that was later classified as disorganization by Main and Solomon (1990). Whilst disorganization is defined as a specific set of behaviours and was used to guide classification in this study, it is possible that disorganization itself might be much more complex, particularly in a sample of children with severe deprivation, as tentatively suggested by the literature (Kahr, 2007; Plitt, 2013; Sachs, 2007). As with the avoidant-ambivalent pattern reclassified as disorganized by Main and Solomon (1990), the

patterns identified in this study might rather be variations of a disorganized attachment. This might explain the higher security found in the secondary and tertiary levels (20% and 12% respectively). It may be that in studying children at-risk, the nuanced responses to attachment needs being thwarted become more evident. This is in contradiction to Bowlby's (1969/1982) linear conceptualization of attachment responses to a deficient environment.

However, the development of attachment categories has been minimal and has not been incorporated into a revised overall framework for conceptualizing attachment. Significantly, while the inherent receptivity to forming multiple attachments (such as to fathers, siblings, caregivers, etc.) is well documented (Bowlby, 1969/1982; Levy et al., 1998; Main et al., 1985; Renn, 2010; Steele & Steele, 2008; Zeanah & Smyke, 2008), most children in this study (70% of the sample) developed more than one maternal attachment strategy. This contradicts van Ijzendoorn and Sagi-Schwartz's (2008) argument that figures will cohere to form an integrated internal working model. However, the primacy of a dominant attachment strategy found in this study ($F_{(1,200)}$ = 315.22, p = <.0001), with others arranged hierarchically, is theoretically supported (Bowlby, 1969/1982; Main et al., 1985). The dominant maternal attachment strategy was significantly more differentiated than the secondary and tertiary maternal attachment strategies.

To understand the maternal attachment network, there must be consideration around exposure to: a) deprivation and trauma; and b) the development of 'self-in-context' in non-Western societies. Many of the children experienced 'severe maternal deprivation', and therefore would need to rely on alternative maternal figures to meet their genetically predetermined attachment needs, and ensure survival. Further to this, theory suggests that multiple (attachment) selfways are fostered in non-Western societies (Mesman et al., 2016; Morelli & Rothbaum, 2007; van Ijzendoorn & Sagi-Schwartz, 2008) and so it is unsurprising that 70% of the sample have a complex attachment. As stated by van Ijzendoorn and Sagi-Schwartz, "We need a radical change from a dyadic perspective to

an attachment network approach" (2008, p.900). As the results of this research suggest, attachment appears to develop along more than one pathway.

7.2 Attachment and Internal World Functioning

Convergences and divergences between attachment and psychoanalytic phenomena - object representations, intensity of emotion and defense styles - were investigated through two potential moderating variables, namely *attachment complexity* and *attachment intensity*, which is unique to this study.

7.2.1 Attachment and Object Relations

Direct links between primary maternal attachment and object representations - assessed by Complexity of Representation of People (CRP), Affective Quality of Representations (AQR), capacity for Emotional Investment in Relationships (EIR), Experience and Management of Aggressive Impulses (EMAI), Self-Esteem (SE), Identity, and Coherence of Self (ICS) - for children from an impoverished background were limited to secure and disorganized attachments. Specifically, secure attachments were associated with increased capacity for CRP, ICS, and EIR. The only significant (negative) correlation between an insecure attachment and object relations was for disorganized attachment and ICS.

While the drawing of conclusions must be circumspect given the small sample of secure attachments, the finding of some but not complete overlap between object relations and attachment is congruent with theoretical (Ainsworth, 1969; Al-Thani & Semmar, 2013; Calabrese et al., 2005; Dunn, 2007; Emde, 2007; Fonagy et al., 1990; Goodman, 2004; Leon, 1984; Roberts & Roberts, 2007; Sandler, 2003; Shapiro, 2007; Sorenson, 2005; Zeanah et al., 1989) and general empirical research (Detrixhe, 2011; Goodman, 2004; Lukowitsky & Pincus, 2011; Priel & Besser, 2001; Wolfaardt & Joyce, 2005).

More specifically, these findings are consistent with previous research that has described some overlap between attachment and the Social Cognition and Object Relations scale (SCORS) (Pinto et al., 2011; Calabrese et al., 2005; Ortigo et al., 2013; Stein et al., 2011) and with other object relations measures (Wolfaardt and Joyce, 2005) but is contrary to research that reports the concepts to be mostly similar (Zvelc, 2010). The findings suggest that secure attachment may be better aligned with object representations than insecure and disorganized attachment, which is supported by previous studies (Pinto et al., 2011; Levy et al., 1998; Stein et al., 2011). Amongst the results reporting some similarity between attachment security and the SCORS, the points of overlap differed amongst the studies. Similar to my results, the Calabrese et al. and Stein et al. studies reported greater security to be associated with more EIR whilst CRP was also significant in the Calabrese et al. study. Contrary to the findings of this research, the studies of Pinto et al., Ortigo et al. and Stein et al. reported convergence between secure attachment and AQR. Although they used similar assessment tools, the samples differed as the participants in my study are in middle childhood (between 8- and 12-years-old). As the adult sample for the Ortigo et al. study also originated from an impoverished context, it is possible that developmental age more than context impacts on the relationship between attachment and certain object representations. Thus, a developmental approach to understanding attachment across the lifespan, and how this interacts with object relations, is required.

The intersection between attachment and object relations at the lowest and highest ends of object relations, albeit limited in this study, supports the findings of Wolfaardt and Joyce (2005). According to the authors, their findings can be accounted for in part by the sensitivity of the Reciprocal Attachment Questionnaire (West et al., 1987) in identifying impaired attachments and primitive object relations. Likewise, it is possible that the Attachment Story Completion Test (ASCT) is equally sensitive in detecting impaired attachments and primitive object relations. However, similar to Wolfaardt and Joyce's (2005) conclusion, the findings provide further evidence for the complexity of the relationship between object relations and IWMs.

While the findings demonstrate the complexity of the relationship between the constructs (Wolfaardt & Joyce, 2005), and adds to the much-needed literature on how IWMs articulate immature object relations (Goodman, 2004), ongoing research is required to deepen our understanding of this relationship. Although limited, some of these findings concur with studies reporting an indirect relationship between attachment and object relations (Lukowitsky & Pincus, 2011; Priel & Besser, 2001); but contrary to Lukowitsky and Pincus (2011), attachment type did not act as a mediator in this study.

The tentative theoretical implication of the results are as follows:

a) The internal or psychic object representation (as measured by the SCORS-G) and attachment functioning are largely different for insecurely attached children during middle childhood and from disadvantaged backgrounds;

7.2.1.1 *Complexity of Representation of People (CRP)*

Informed by Winnicott's thesis that attachment (or positive investment in another) is necessary before you can find and use an object (1968/1989, 1969), the critical review of the literature suggested that the inconclusive findings of research conducted to date might pivot on investigating the developmental point at which IWMs and object relations converge. Two such points of convergence were identified by this research, namely, as attachment intensity increased (primarily reflecting insecure attachments which comprised 93% of the sample), two object relation scales - namely CRP and ICS - decreased. ICS is discussed in section 7.2.1.2 below. It is important to note that the author of the SCORS defines CRP as comparable to Bowlby's "internal working models" (1969) and therefore as a representation of the attachment relationship (Westen, 2002). The CRP scale was developed to measure the extent to which the child is able to differentiate between Self and other.

For Winnicott, when the child discovers that the external object is separate to her/him and over which s/he has no omnipotent control, it allows for differentiation between Self and other

(Winnicott, 1974). In other words, the child is now able to understand that s/he cannot ascribe his/her thoughts and feelings to someone else as others have their own unique response to situations. The inverse relationship found between attachment intensity and CRP indicates that attachment security is associated with better differentiation between Self and other.

Thus the results of the current study suggest that convergence may depend on the level of security. In other words, only with sufficient security can the child discover, use and relate to a differentiated external object or external mother with a mind of her own. Conversely, with insecurity or insufficient environmental provision, the external mother is not clearly differentiated and therefore not available to be used (Winnicott, 1968/1989, 1969).

The description of attachment as a frame (Bowlby, 1988c) or organizational structure (Blatt, 2008; Sroufe & Waters, 1977) is supported in the literature, and is said to provide the child with a *centre* of security, or base from which the world can be explored (Coles, 2015); or, as suggested here, from which objects may be found. Stated differently, there needs to be enough accumulation of environmental provision before objects can be found and related to (Rodman, 2003; Winnicott, 1965). Stated in attachment terms, you first need to sustain positive valence or investment in another before you can find and make use of good and bad object relations. The finding that security was significant supports Winnicott's theory that attachment is a precondition for object relating (1964/1987) as secure children were better able to differentiate between Self and other, and therefore relate to another that is free of projections and omnipotent control.

It is important to hold in mind that Bowlby was careful to conceptualize attachment behaviours as normative and healthy, aimed at ensuring survival (1979). Thus, it is nonsensical to conceptualize attachment as 'bad' or 'negative' (such as a 'persecutory' attachment), but rather as insecure or weak. As soon as one comments on good or bad relations, one has moved into another arena, that of object relations. While the internal object is a representational figure whose perception is

influenced by phantasy and projection (Klein, 1945), the attachment figure cannot be phantasized but must be a real, physical presence.

7.2.1.2 *Identity and Coherence of Self (ICS)*

Of importance, and perhaps a function of developmental age, this is the only study where ICS was found to correlate significantly with attachment, and did so for both secure and disorganized attachments. The main effect also indicated that an increase in security was associated with an increase in ICS; whilst an increase in disorganization was associated with a decrease in ICS.

Winnicott's (1974) thesis that differentiation between Self and other allows for a deepening experience of Self, suggests an interdependence between these two processes which could clarify why significance was only found for CRP and ICS. Children who were better able to differentiate between Self and other (indicated by higher CRP scores) had a better developed sense of Self (indicated by higher ICS scores). Furthermore, the direction of this relationship is supported by the limited theoretical (Fonagy et al., 2010; Fonagy et al., 2002) and empirical (Bauminger et al., 2008) literature available; although the Bauminger study did not include a disorganized category, merely an avoidant and general anxious attachment classification.

For Fonagy and colleagues, mentalization and subsequently self-coherence, is most impacted on by secure and disorganized attachments: "Severely insecure, abusive, inconsistent and disorganized attachment relations may well be detrimental for mentalization to survive as a dominant, predictive interpersonal strategy" (Fonagy et al., 2007, p.314). As the Ortigo et al. (2013) study did not investigate ICS in relation to attachment, it would be beneficial to investigate whether this finding would be repeated in an adult sample from an impoverished context. Contrary to the Bauminger study, the current study did not report a relationship between avoidant attachment and self-coherence.

The tentative theoretical implication of the results are as follows:

b) there is overlap between attachment at the extreme ends of the continuum (i.e. for secure and disorganized) and the development of identity and a sense of Self (i.e. ICS);

7.2.1.3 *Attachment complexity*

The relationship between primary attachment type and object representations was not mediated by attachment complexity, or by attachment intensity. Although the use of a continuous attachment measure is increasingly favoured in the literature, the use of attachment intensity as a moderating variable was unique to this study, and demonstrates that attachment intensity does not mediate the relationship between object representations and attachment type.

However, attachment intensity was found to moderate the relationship between attachment complexity and capacity for EIR. As insecure attachments became more maladaptive or disorganized, capacity for EIR decreased for children with a simple attachment; thus, participants with high primary attachment intensity and a simple attachment were the least invested in relationships. Capacity for EIR was however not as compromised in children with complex attachments. It is important to question why complex (and not simple) attachments are protective of capacity for EIR. Possibly more than one attachment style indicates attempts, driven by survival instincts, at preserving the primary attachment relationship, leading to the consequent emotional investment in others. Thus complex attachments perform an adaptive function, similarly to insecure attachments (Maego, 2013; Simpson & Belsky, 2008).

The instinct to attach is a powerful primal instinct (Bowlby, 1979) that adjusts to adverse environments to ensure survival by employing strategies such as avoidance (Crowell & Treboux, 1995; Pearce, 2009) or makes use of secondary attachment styles (van Ijzendoorn et al., 1999), which is supported by my findings. The van Ijzendoorn et al. study was however based on children with a primary disorganized attachment style and were largely drawn from Western studies. In their

study only 25% of the children employed a secondary attachment style compared to 78% of the children with a primary disorganized attachment in this study. The higher incidence of complexity found in this study suggests support for Morelli and Rothbaum's (2007) argument that flexibility across contexts is favoured in non-Western societies and thus more than one attachment strategy is likely to develop regardless of environmental adversity.

Currently, research has not adequately considered the potential impact of complex attachments, and this study indicates the importance of doing so, as this could enhance understanding around how a child in challenging environments adapts to ensure survival.

Given the positive correlations found between security and three of the SCORS-G scales, the possible impact of secondary secure attachment on object representations was analyzed. The analyses indicated that that there is no such interaction. Together with the finding that certain attachment categories were discreet (namely secure and avoidant in relation to ambivalent and disorganized), this implies that complex attachments do not interact or form an integrated attachment representation when interacting with object representations; rather different maternal attachment styles act independently of each other (for example, a secure strategy does not influence the experience of an avoidant style). These findings contradict the literature that argues for the formation of an integrated IWM (Target et al., 2003; van Ijzendoorn & Sagi-Schwartz, 2008).

Certain attachment categories were not discreet (i.e. secure and avoidant, and ambivalent and disorganized) which supports the absence of discreet categories argued for by Fraley and Spieker (2003). The finding that avoidant attachment is discreet in relation to ambivalent attachment in middle childhood differs from the literature (Kerns & Brumariu, 2016) and from the suggestion by Brennan et al. (1998) that these categories are dimensional rather than discreet. It is possible that the non-Western context of this study impacted on the findings as SA children tend to rely on multiple caregivers (Mesman et al., 2016). A dimensional conceptualization of attachment is based on the underlying belief that attachment differs more in degree (of anxiety and avoidance) than of

type (Fraley, Wallar & Brennan, 2000). Thus whilst some styles might differ more in relation to degree of interpersonal anxiety and avoidance (i.e. secure and avoidant, and ambivalent and disorganized respectively), others styles differ fundamentally in kind (i.e. secure in relation to ambivalence and disorganization, and avoidance in relation to ambivalence and disorganization).

While other studies have used measures such as the ASCT or the Adult Attachment Interview to identify the presence of more than one attachment strategy, this is the first known study to: a) articulate the theoretical implications of this; b) use the term 'complex attachment' in describing this phenomenon; and c) investigate it as a potential moderator in relation to object representations.

The tentative theoretical implications of the results are;

a) the importance of articulating a normative developmental attachment series across age with attachment differentiated in terms of intensity, complexity and context. This in turn would allow for clearer links between attachment and other intrapsychic developmental markers to be articulated.

7.2.1.4 *Conclusion*

Overall, the limited interaction between attachment and the SCORS-G object relation scales indicates that the constructs are not identical. This supports the original thesis of Bowlby (1979, 1988b) and Winnicott (1957) as well as contemporary research. Despite attachment and holding (which is pre-object relating) being widely supported as comparable in contemporary literature (Fonagy, 2001), empirical research continues to investigate attachment in relation to object relations. Furthermore, while the results are congruent with most contemporary research that identifies points of intersection between these constructs but not complete convergence (Ainsworth, 1969; Pinto et al., 2011; Al-Thani & Semmar, 2013; Calabrese et al., 2005; Goodman, 2004; Goodman & Moon, 1995; Levy et al., 1998; Lukowitsky & Pincus, 2011; Ortigo et al., 2013;

Priel & Besser, 2001; Sandler, 2003; Sorenson, 2005; Stein et al., 2011), authors tend to foreground the points of convergence between the constructs in the literature. This may have created misunderstanding in the field about the extent of the overlap.

The research findings question the theoretical integration argued for by psychoanalytic attachment theorists such as Holmes (2011), Eagle (1995; 1997; 2013) and Fonagy and colleagues (1999, 1999b, 2001, 2005; Fonagy et al., 1991, 1992, 2002). These theorists argue that fantasy and projection influence how the attachment figure is experienced and therefore on security felt. Attachment however seems to provide something unique to psychological development, and the findings of this research seem to support the thesis that holding (or attachment) (Bowlby, 1988b), predates object relating (Winnicott, 1957). If attachment security is a prerequisite for object relating, then IWMs and object relations potentially interact at the point that a differentiated secure attachment is made. This has been theorized by Bowlby to be achievable around the age of three (1969/1982). Furthermore, this relationship seems to be particularly complex when attachments are insecure and the environment is impoverished. These findings have contributed to the limited empirical research exploring the interface between attachment and object relations (Calabrese et al., 2005). The context within which this study was conducted and the developmental age of the participants are of critical importance in understanding the results.

In rectifying “the bad blood” (Fonagy, 1999; Fonay & Campbell, 2015) between the attachment and psychoanalytic paradigms, perhaps the pendulum has swung too far in the other direction. While theoretical revolutions often involve a usurping of old ideas (Kuhn, 1996), it is time to articulate ‘common ground’ (Green, 2005) as well as the differences with equal boldness, so that the unique contribution of each paradigm to understanding psychological development can be retained and deepened.

7.2.2 Attachment in Interaction with Intensity of Emotion and Defense Styles

Concerning attachment in relation to intensity of emotion, only attachment intensity moderated the relationship between primary attachment type and Positive Emotionality. This was not found for Negative or Overall Emotionality. Specifically, a significant interactive effect was found for security and ambivalence. Interestingly, as security increased, Positive Emotionality decreased, whilst the direction of this relationship reversed for ambivalent attachments (as ambivalence increased, Positive Emotionality increased). The finding that significance was limited to attachment and Positive Emotionality is congruent with Ainsworth's thesis that attachment reflects the love (or positive) component of an intimate relationship, and does not capture the array of feelings reported in psychoanalytic theory (Ainsworth, 1969).

As previously stated, attachment refers to the extent of positive investment in an attachment figure. The Differential Emotions Scale-IV (DES-IV) asks children to report on feelings they are aware of (i.e. conscious feelings), and does therefore not reflect unconscious feelings. In keeping with Ainsworth's thesis, the love component is likely to be the more conscious feeling state. Further to this, the DES has questionable reliability in low SES groups as it is suggested that participants do not have the emotional literacy and understanding of their emotions to accurately self-report (Youngstrom & Green, 2003). While the literature reports that secure attachment is associated with greater joy and positive emotionality (Kerns et al., 2007; Becker-Stoll et al., 2001; Mikulincer & Shaver, 2005), the inverse relationship reported here might reflect that even in challenging environments, children with a secure attachment are more able to know what they are feeling and to articulate this (Brumariu, Kerns, & Seibert, 2012; Cooke, Stuart-Parrigon, Movahed-Abtahi, Koehn & Kerns, 2016; Parrigon et al., 2015). The relationship between understanding one's emotions, and therefore being able to rate them, and insecure attachment is not well researched (Parrigon et al., 2015).

In opposition to securely attached children, the lack of an anticipated relationship between insecurely attached children and mood (Kerns et. al., 2007) might indicate that children who cannot

identify and regulate their feelings are consequently not able to accurately report on their feelings. This is supported by research that has found that insecurely attached children (Spangler & Grossman, 1993) or abused children do not express their true feelings (Crittenden, 1988). This supports Bion's theory that if your feelings have not been known and digested, you cannot know what you are really feeling (Bion, 1963). Interestingly Bowlby himself stated that detached children cannot experience a real feeling (1965). Children with ambivalent attachments typically struggle in regulating their emotions, and the results reflect a hyperarousal in these children, congruent with the literature (Cassidy, 1994).

Attachment type and defenses (as operationalized in this study) were not significantly related, even when this relation was moderated by attachment complexity and attachment intensity. While the absence of a relation between attachment and defenses is contrary to both theoretical research (Fonagy et al., 1992; Fonagy, 1999; Colin, 1996) and empirical research (Besharat et al., 2001; Bi & Yang, 2008; Cramer & Kelly, 2010; Greenfield, 2015; Wiebe, 2006), it lends support to the suggestion that IWMs and object representations are not identical in children in middle childhood from a deprived context.

While attachment is often compared to a defensive organization or coping style (Colin, 1996; Fonagy, 1999; Fonagy et al., 1992; Howe, 2005), defenses unconsciously galvanized by internal objects to ward off internal anxieties and conflicts (Scano, 2007) cannot be reduced to one of four possible responses aimed at increasing physical proximity to an attachment figure or dismissing attachment needs. To speak of a defensive attachment organization is to pathologize normal attachment seeking behaviors, a temptation which Bowlby strongly resisted, and which prompted his break from the psychoanalytic community (1979). Thus, Bowlby referred to an insecure attachment when there were failures or disruptions in attachment. This is different to being in a defensive mode.

Significant correlations were found between four of the object relations scales and Immature Defenses (measured by fear and anxiety, regression, and weak or absent ego controls). As AQR, SE and ICS increased, use of Immature Defenses decreased. Conversely, as EMAI increased, employment of Immature Defenses increased. While more primitive defenses were employed by less well-developed object relations, this was not the case for attachment as hypothesized by the study. This might provide support for the hypothesis that the internal mother and attachment mother - or object mother and environmental mother as conceptualized by Winnicott (1963) - are different, as psychodynamic defense styles are not galvanized by the attachment mother, but by the internal object representation.

Of further interest, this sample of children from disadvantaged backgrounds tended to under-rely on defenses organized around Maturity (compromised of humour, identification, altruism and suppression), Self-Orientation (includes denial, idealization, somatization, withdrawal and omnipotence) and Other-Orientation (namely projection, devaluation, splitting, and passive aggression), as the scores obtained were low on average. This suggests that these children have insufficiently developed and organized defensive styles to ward off anxieties and manage conflicts (be it internal or external), which may account for why no relationship was found. However, age (Cramer, 2002; 2008), context, and the interplay between them (Cramer, 2009) may be important determinants of whether a relationship between attachment and defense styles will be observed.

Researchers have questioned whether the increased use of avoidant strategies, less use of ambivalent strategies, and increased regulation of emotion found in children during middle childhood in Western societies would be replicated in non-Western societies that favour interdependence (Kerns et al., 2006). While a high incidence of avoidance was found, it was not associated with increased emotional regulation. Further to this, the relationship between security and competence in emotional regulation in Western societies (Morelli & Rothbaum, 2007; Parrigon et al., 2015; van Ijzendoorn & Sagi-Schwartz, 2008) was not replicated in a collectivist society, in

which the Self depends on an interpersonal context where relations are regulated within the community (Morelli & Rothbaum, 2007). This is in contradiction to the prevailing understanding of how attachment is operationalized in Western cultures (Schore, 2001; Schore & Schore, 2008) but supports the research that context (both cultural and economic) moderates the relationship between attachment and emotional functioning (Gaylord-Harden, Taylor, Campbell, Kesselring, & Grant, 2009; Liu & Huang, 2012).

7.3 Conclusions

7.3.1 Conclusions from the Study

7.3.1.1 The distribution of attachment, quality of object relations, intensity of emotion, and defense styles

The first aim of this study was to explore the distribution of attachment, quality of object relations, intensity of emotion, and defense styles in a sample of socially and economically disadvantaged South African children in middle childhood. The attachment and intrapsychic profile that emerges for this sample is of a very poorly developed and undifferentiated internal world comprised of insecure attachment, very poor quality of object relations, inadequate defense styles, minimal emotional arousal and immature functioning.

The incidence of insecurity (93%), avoidant attachment (37%) and disorganized attachment (34%) are much higher than results reported for similarly deprived contexts. The results support the literature that while socio-economic deprivation has a greater influence on the prevalence of avoidant and ambivalent attachments than on disorganization (Peterson, 2004; van Ijzendoorn et al., 1999; van Ijzendoorn & Sagi-Schwartz, 2008), severe psychosocial hardship together with exposure to multiple traumas has a devastating influence on the prevalence of disorganization (Pritchett et al.,

2013; Tomlinson et al., 2005). What has become evident is that investigating attachment in middle childhood allows for greater clarity around the potential developmental complexities of attachment in a history of deprivation, exposure to trauma, abuse and/or neglect, and contributes to the dearth of available attachment literature (Parrigon et al., 2015) that can help to inform policy (Bhana, 2010). The preponderance of insecure attachments (93%) and high prevalence of children living in fear (34% disorganized attachment), provides evidence of the fragmentation of society's capacity to contain, protect and provide for families (Gericke, 2004; Institute of Race Relations, September 2018) in a way that allows children to subjectively experience support.

The severe impact of adverse environmental conditions on thwarting the development of psychological mechanisms, namely defense styles and affect regulation, was also evident, since the age of the participants meant that there had been sufficient time for these functions to develop.

7.3.1.2 Interrelations between attachment type, attachment complexity and attachment intensity

The second research aim was to conduct an exploratory investigation of interrelations between attachment type, attachment complexity and attachment intensity. Most participants in this sample were classified with a complex attachment (70%), highlighting the importance of taking this variable into account when conducting research. The children in this study tended to rely on more than one attachment strategy to manage their environmental challenges. While the results from this study support the universality of attachment (Mageo, 2013; van Ijzendoorn & Sagi-Schwartz, 2008; van Ijzendoorn & Sagi, 1999), the results also support the imperative to develop cultural understandings and of attachment (Mageo, 2013).

The findings suggest that attachment is a more complex construct in children at risk than currently conceptualized in the literature, and instructs us to be conscious of environmental and cultural pathways to attachment. Attachment presents here as a continuous multi-dimensional variable,

rather than a single categorical variable as often conceptualized. This supports the literature advocating for more refinement in the classification of attachment (Fonagy & Campbell, 2015; Sachs, 2007) and for use of continuous rating scales (Fraley & Spieker, 2003; Kerns et al., 2011). Attachment 'style' implies that there are differences in styles, but currently a mono-dimensional concept of attachment is still applied in research and clinical practice. Complex attachment supports the view that there are multiple attachment selfways in collectivist cultures (Morelli & Rothbaum, 2007; van Ijzendoorn & Sagi-Schwartz, 2008). If we debunk the rigidity and determination of a central self as conceptualized in Western psychoanalytic and attachment theory, it will profoundly - and perhaps painfully - destabilize our understanding of who we are in the world and how we come to be. However, many more exploratory studies are needed before a clearer understanding of attachment, its permutations, and its determinants can emerge.

In conclusion, the findings suggest that attachment theory has not taken into account the accumulative influence of exposure to psychosocial stressors and culture on the attachment security of children in middle childhood. When doing so, attachment is complex on both a vertical plane (as indicated by attachment intensity) and a horizontal plane (as indicated by attachment complexity). These findings contribute to the emergence "of contradictory and less clear-cut data surrounding attachment " in research (Fonagy & Campbell, 2015, p.229) and hopefully towards a needed shift in our conceptualization of attachment.

7.3.1.3 Attachment in relation to object relations, intensity of emotion and defense styles

The third research aim was to analyze attachment type in relation to object relations, intensity of emotion and defense styles, and to consider whether any of these relationships are moderated by attachment complexity or attachment intensity.

As stated in the literature review, this research has returned to the assessment of attachment in children at risk. This is where Bowlby first became aware of the importance of attachment, as the

consequences of impaired attachment showed itself most clearly in this population, although his research focused on infants. It was therefore anticipated that the relationship between attachment and markers of internal world functioning would likely be most evident in a sample of children who comprise the extreme end of the socio-economic continuum.

The results show that primary maternal attachment is a complex construct which does not tend to interact significantly with components of internal world functioning (namely, object relations, intensity of emotions and defense styles) in a sample of eight- to 12-year-old children from disadvantaged backgrounds in South Africa.

This research contributes to the limited body of work exploring attachment in middle childhood using a continuous measure of attachment (see Kerns et al., 2011); and appears to be the first-known research to employ this measure in relation both to children at-risk, and internal world functioning.

However, while most interactions are not significant, secure attachment seems to be more strongly aligned with quality of object relations and is supported by the literature (Pinto et al., 2011; Levy et al., 1998; Stein et al., 2011). This suggests that security differentiates object relations better due to greater maturity or complexity of psychological functioning. Attachment intensity however moderates the relationship between attachment complexity and capacity for EIRs. Specifically, increased attachment intensity is associated with decreased EIRs in children with a simple attachment but not for children with a complex attachment, suggesting that use of more than one attachment strategy protects emotional investment in relationships. I have argued that this strategy is used to promote survival, the driving force behind attachment.

While attachment complexity and attachment intensity are shown to be important signifiers of attachment in this sample of disadvantaged children in middle childhood, to date contemporary literature has not taken these attachment descriptors into consideration when reporting on the

relationship between attachment type and object relations, intensity of emotion, or defense styles. This has likely limited the breadth and depth of the understanding of attachment, as well as the differences between attachment and intrapsychic development.

The relationship between competence in regulation of negative emotions and attachment security found in Western societies (Kerns et al., 2006; Morelli & Rothbaum, 2007; Parrigon et al., 2015; van Ijzendoorn & Sagi-Schwartz, 2008), was not replicated in a non-Western culture that promotes interdependence. This is significant as it suggests that not only are there alternative pathways to attachment, but some of the markers of secure attachment in non-Western societies may be different.

The proposed relationship between attachment and defenses articulated in the literature (Fonagy et al., 1992; Fonagy, 1999; Colin, 1996) was not found in this study although empirical evidence of this relationship in the literature is limited (Besharat et al., 2001; Bi & Yang, 2008; Cramer & Kelly, 2010; Greenfield, 2015; Wiebe, 2006). Rather, it was suggested that psychodynamic defense styles are galvanized by internal objects to ward off anxiety or manage internal conflicts. Attachment seeking behaviours are survival strategies to meet attachment needs.

Overall the study suggests that, while there are points of contact, attachment and intrapsychic development capture different aspects of psychological functioning in middle childhood which the literature has not adequately explored or articulated. Furthermore, the repercussions of environmental deprivation and maltreatment for psychological health and development revealed by this study are alarming. This research addresses the paucity of research on vulnerable and orphaned children in sub-Saharan Africa (Kelley et al., 2016; Muhati-Nyakundi et al., 2017) and is only the second known study (see Pritchett et al., 2013) to investigate attachment in high-risk middle childhood in SA. Some of the policy implications are considered below, and thereafter limitations of the study and directions for future research addressed.

7.3.2 Policy Implications

The results provide support for the damaging influence of early disturbances on attachment, quality of object relations and defense styles. While the critical importance of early childhood intervention programs in low to middle-income countries is recognized globally, including by the World Health Organization and United Nations International Children's Fund, and supported by organizations such as the World Bank, their implementation still lags behind the need (Richter, Dawes & de Kat, 2010). According to Terr (2003), one of the Three Principles of Healing requires that society corrects and repairs traumatic experiences. Thus, it is society that needs to re-integrate children and rebuild their shattered trust. Specific interventions can include:

1) More financial, political and psychological investment in the mental health of children. This would be cost effective in the long-term, as neglected children with impaired attachment and psychopathology are ultimately costly to society.
2) Providing caregivers with early support and skills training through Early Development Centres. This will also allow healthcare workers to identify potential problems in the attachment process, and intervene before maladaptive patterns can become established: "Investing in early childhood development is essential to helping more children and communities thrive. Two-hundred-and-forty-nine million children under five years in low and middle income countries are at risk of not reaching their developmental potential, yet low-cost interventions could reverse this trend." (6 December 2016, *wits.news@wits.ac.za*).

7.3.3 Limitations of the Study

A limitation of the study is the numerous analyses conducted with a small sample size, as this weakens statistical power. However, the results could be due to limitations of the measurements used in this study. The measurement of attachment and object relations is not without its own complexities. The operationalization of attachment across studies is not uniform, which also limits

the number of direct comparisons that can be made between studies. While attachment is conceptualized as continuous and categorical, the typological model of attachment has largely persisted in research. This research has explored attachment through both the categorical and continuous models. As there is: a) no universal operational definition of object relations, the generalizability of findings is limited to the instruments used in research; and b) no uniform approach to exploring points of convergence and divergence between object relations and internal working models, researchers tend to focus on different characteristics of the constructs, which limits comparisons that could be made between studies. This limitation in attachment (and with emotion) research is echoed by Kerns and colleagues who call for a more streamlined approach to research in the field (Parrigon et al., 2015). The measurement of object relations and attachment in this research has provided a renewed perspective from which the relationship can be understood, whilst also building the limited body of literature. The findings of the research suggest that it is problematic to reduce attachment in children at risk to four simple attachment types. This is not dissimilar to the inability of object relation theorists to agree on a standard set of object relations that apply universally, as evidenced by the (growing) plethora of psychodynamic theories that contribute to our understanding and description of the internal world.

The context and the disproportion of insecure attachment in the sample may account for why a stronger relationship between attachment and object relations was not found. A possible limitation of the research was the relatively small number of securely attached children, which restricts comparisons that can be made between the securely and insecurely attached groups. Analyses investigating abstract reasoning only considered the insecure group, due to the limited sample size. Thus, the impact of abstract reasoning is probably not understood fully, and should be investigated using a bigger sample size. However, the focus of the study was a deprived sample; and one of the significant findings is that the secure group is under-represented in this population.

A further limitation is the use of the Differential Emotions Scale-IV (DES-IV), a self-report measure, to assess emotional functioning. This sample of children, characterized by neglect, abuse and abandonment, had a low level of emotional literacy and therefore might not be able to report their feeling states accurately. Thus as cautioned by Youngstrom and Green (2003), the reliability of the DES-IV in low socio-economic groups is questioned. While the researcher used picture cards to assist children in identifying their feelings, this does not eliminate the concern.

The completion of the Comprehensive Assessment of Defense Style (CADS) by guardians was also a limitation, as they often did not know the child well. This, together with the previous point, raises the question of how to best conduct research on neglected children who do not know their own internal worlds, and who are often not well-acquainted with their guardians. It is therefore suggested that projective assessments of emotional and defensive functioning are likely to provide more accurate assessments in this sample of children.

As this study was interested in exploring the influence of context (socio-economic and cultural) on attachment and intrapsychic development, the children all originated from socio-economically deprived contexts. However, the analyses did not differentiate between data collection sites (hospital, inner city school and children's homes). Consequently, the possible influence of collection sites on patterns observed is not known. Given the extreme lack of attachment research on children in middle childhood attending an outpatient facility (Shechtman & Dvir, 2006), it is particularly important that this sample receive more research attention.

Finally, the measures used in this study have not been normed and standardized for a South African population; and have therefore not taken cultural markers of secure attachment into consideration during scoring. However, this study has formed part of the process of establishing norms for the Attachment Story Completion Test (ASCT), Social Cognition and Object Relations Scale -Revised G (SCORS-G), DES-IV and CADS, albeit for children from a very deprived context exposed to psychosocial stressors. Further to this, the ASCT and SCORS-G was used, since they are projective

tests that rely on the researcher's experience in interpreting the protocols, rather than on the child's capacity to articulate complex psychological processes. It must be noted that the researcher is a clinical psychologist with 18 years of experience in working with children and the projective technique. During administration of the ASCT, the researcher became aware that Stories One and Two were primarily warm-up stories, due to the cultural differences found when applying them tothe South African population, as these children needed both stories to settle into the task. Stories One and Two were used to help the child become familiar with manipulating the dolls, and were used to identify the protagonist. As found by Kerns (2013), Story Two ('Spilled Juice') seemed to evoke more parental disciplinary responses rather than attachment responses. However, Stories One and Two were both considered when making the final classification should something significant have occurred that clearly indicated a specific type of insecure category (personal communication with Kerns, March 2011).

7.3.4 Directions for Future Research

a) Given that object relations continue to develop into adolescence (Westen, 1991), and attachment security remains open to revision (Schore, 2018), it is recommended that this study be repeated with adolescent children from a similar context, to explore whether the paucity of relationships between attachment and object relations, intensity of emotion, and defense styles continues into adolescence. Furthermore, it would be of use to conduct a longitudinal study to map the developmental progression of attachment across the lifespan, within different contexts.

b) Continue to rigorously research the articulation between attachment and object relations, within different contexts (socio-economic and cultural), and across developmental ages, to deepen and expand our understanding of these psychological processes. More specifically, it would be important to use continuous measures of attachment to investigate whether

complex attachments and patterns would be found. Such discoveries could help to advance our conceptualization of attachment.

c) Much more research on cultural pathways to attachment and behavioural markers of security within collectivist cultures that promotes the 'self in context' is needed. For example, investigate discrepancies in dependency on attachment figures (more prevalent in non-Western societies) versus utilization of attachment figures to promote exploration (more prevalent in Western societies) to better understand how attachment may present in a non-Western sample, including from a deprived context in middle childhood. This research did not find a link between attachment and affect regulation and it would be very important to explore whether this finding would be repeated in studies from other non-Western societies.

d) Conduct further research to assist with providing South African norms for the measures used (i.e. the ASCT, SCORS-G, DES-IV, and CADS) for children from similar and more resourced contexts.

In conclusion, this study sought to explore interrelationships between attachment (operationalized by attachment type, attachment complexity and attachment intensity), and markers of internal world functioning (i.e. object relations, intensity of emotion, and defense styles). These interrelationships were studied in a sample that has received very little attention in the literature, namely, children in middle childhood from a socio-economically deprived, non-Western context. The study commenced with a critical review of attachment theory and arguments for, and against, convergence between attachment and internal world functioning. The review underscored the limitations in our conceptualization of attachment, the importance of factoring in the impact of age and context on development of attachment, and the need for more empirical verification of the conceptual links being argued for between attachment and intrapsychic development.

The importance of ongoing research in these areas was borne out by the study's findings. The results point to the critical impact of socio-economic and cultural context, and age on the prevalence of attachment security (93% insecure), attachment type (37% avoidant and 34% disorganized) and attachment complexity (70% of the attachments were classified as complex). Moreover, the study found that a mono-dimensional operationalization of attachment as only 'type' fails to capture the complex ways in which children from a disadvantaged context in a more non-Western SA community survives. Rather, "a balance between universal trends and contextual determinants" allows for adaptation to the environment (Mesman et al., 2016, p.870). Thus the influence of the environment extends beyond the mother, or primary caregiver, to include the socio-economic and cultural context.

Overlap between attachment and object relations is primarily limited to secure attachment and three of the object relations scales (namely, CRP, ICS and EIR) – only disorganized attachment correlated with ICS. Interestingly, the limited overlap does not contradict existing literature. Whilst contemporary literature tends to foreground points of overlap between attachment and psychoanalytic constructs, especially between object relations and internal working models, many points of divergence were noted in the literature.

Overall the results support the need for more research (Fonagy, 1999) and shifts (Fonagy & Campbell, 2015) to clarify relationships between attachment and intrapsychic processes. More so, this research highlights the critical importance of investigating intersections between context (socioeconomic and cultural), attachment and internal world functioning. Contrary to studies conducted in Western societies, attachment security was not related to competence in emotional regulation. Exploration of interrelationships was achieved through the investigation of attachment complexity and attachment intensity as potential moderators, and is the first known empirical research to do so. The findings suggest that both the attachment and psychoanalytic paradigms

contribute something distinctive to psychological development whilst overlap only seems to occur at a particular epoch in psychological development.

When considering the limitations of the research, a number of important issues were considered such as; a) the complexity inherent to studying a sample of children who are not well known to their guardians, b) findings are generally limited to the instruments used in research as there are no universal operational definitions of object relations, emotional functioning and defense styles and c) the need for standardized norms for instruments used in a SA context.

It is however hoped that this study will help to deepen our understanding of the attachment world of children at risk, and the complex ways in which attachment does, and does not interact with their internal worlds.

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Appendix A

Bretherton's, Ridgeway's and Cassidy's (1990) ASCT administration guidelines

APPENDIX:
STORY COMPLETION TASKS TO ASSESS
YOUNG CHILDREN'S INTERNAL WORKING MODELS OF CHILD AND PARENTS IN THE ATTACHMENT RELATIONSHIP

Inge Bretherton and Doreen Ridgeway

This assessment consists of five story beginnings that are to be acted out with small family figures and other simple props. Each story is designed to elicit responses regarding a particular attachment issue. The idea for these stories came from a prior study, designed in collaboration with Marjorie Beeghly, in which we assessed children's understanding of emotions and roles. The issues addressed in the story beginnings are (1) the attachment figure in an authority role (the spilled juice story), (2) pain as an elicitor of attachment and protective behavior (the hurt knee story), (3) fear as an elicitor of attachment and protective behavior (the monster in the bedroom story), (4) separation anxiety and coping (the departure story), and (5) responses to parental return (the reunion story).

ATTACHMENT STORY COMPLETION PROTOCOL

Materials

Family Figures. Two "realistic, bendable" (catalog description) doll families each comprising a father, mother, girl, and boy. The two families can be combined so as to yield a father (F), mother (M), grandmother (GM), and two children (2 Cs), a smaller and larger boy, or smaller and larger girl. To create the grandmother, the hair of one of the mother dolls is painted grayish-white. The dolls can be obtained from several national school supply firms. To prevent the dolls from falling over, they are mounted on plastic stands (those used for Barbie dolls are suitable if you can obtain them).

Other Props. A small wooden box to represent a table; a birthday cake (about the size of a piece of tinkertoy; a set of very small dishes and silverware in suitcase or box; a table cloth (optional); a piece of green felt to represent grass (9×9 inches); a piece of gray or beige artificial sponge, cut to look like a rock; a bed and small felt blanket; a wooden box (4×6 inches) painted like a car.

Administration

The task is administered at a child's table, with the child and tester sitting opposite one another. Bring out the props as needed, naming each one (except for the dolls that are identified at the beginning). After each story, ask the subject to put the figures over to one side, saying, "Can you get them ready for the next story?" To lead into the next story, the tester may say something like, "Now I have an idea for a different story," or "Are you ready for something different now?"

The stories contained in this protocol are part of a larger set developed in collaboration with Helen Buchsbaum and Robert Emde. The remaining stories can be obtained from them. The monster in the bedroom story was developed by Helen Buchsbaum; the remainder were developed by Inge Bretherton and Doreen Ridgeway.

Before beginning presentation of the stories that are part of the assessment, it is a good idea for the tester (T) to present a warm-up story to get the subject to feel comfortable with handling the figures. We have chosen a birthday-party story for this purpose. It is not important to stick precisely to the script for the warm-up story, but it is important to follow standard procedure for the stories that form part of the assessment: "spilled juice," "hurt knee," "monster in the bedroom," "departure," "reunion." The latter is true whether the stories are used as written or whether they are somewhat altered. For example, they could be administered with one parent only, or with a babysitter instead of the grandmother. One change that we are considering for further studies is to present the five stories as events of one day in the family's life (a suggestion we owe to Ned Mueller).

STORIES

Introduction of Figures

T: "Look who we have here." (Bring out family.) "Here's our family. Look. This is the grandma, this is the daddy, this is the mommy, and these are the girls, Jane and Susan (and these are the boys, Bob and George)." (Show them to the subject as you name them.)

T: "Who've we got?" (Point to family figures.) "You know what? I've got an idea. Let's pretend to make up some stories about them. Tell you what, how about if I start a story about our family and you finish it."

Warm-up: Birthday Story. (M, F, GM, 2Cs, table dishes, cake.)

Put out the figures like this:

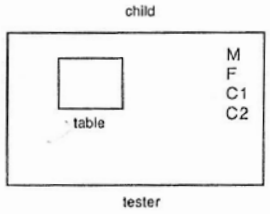
T: "Here's their table and what's this?" (Show cake to subject and wait for subject to name it.) . . . "What kind of cake?" . . . "Yes, it's a birthday cake. You listen carefully to the story. The mommy has baked this beautiful birthday cake and she calls out":

M: "Come on grandma, come on Dad, come on boys (girls), let's have a birthday party."

T: "Show me what happens now." (Inviting tone of voice; let the subject play with the figures or tell a story yourself if the subject does not.)

Spilled Juice Story. (2Cs, M, F, table, dishes.)

T: "O.K., I think I have an idea for a new story." (Put away the grandmother and set out the figures as below, away from the table.)



T: (Shake the box with the silverware.) "Can you help me set the table for dinner." (Give box to subject, wait till subject has set the table, help if necessary.)

T: "Now put the family around the dinner table so they're ready to eat" (Wait till subject has placed the figures.)

T resumes: "Here is our family eating dinner and Bob (Jane) gets up and reaches and spills his juice" (Make child figure knock cup off toy table so cup is visible to subject.)

M: "Bob (Jane) you spilled your juice!" (Reproachful tone of voice, but don't overdo; turn M toward Bob or Jane, and move her up and down while she is talking.)

T: "Show me what happens now."

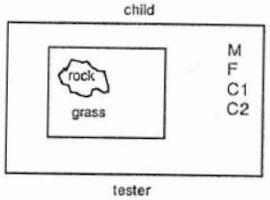
Prompting Procedure

T prompt (if subject does not spontaneously mention: "What do they do about the spilled juice?" T prompt if subject gives only one response: "Anything else?" "What else?" or "Then what?" If subject performs ambiguous actions with figures, ask "What are they doing?" and if the subject uses an ambiguous pronoun when talking about the figures, ask "Who was doing it?" T can also repeat the subject's statement in question form, to verify what the subject said ("The mommy wiped the juice? And then what?"). If the subject asks for the GM, say "She's not in the story, we'll get her out again later."

Note that these prompts are designed not to suggest precise ideas to the subject. The only exception is the prompt that focuses the subject's attention on the issue (spilled juice) if it has not been addressed.

Hurt Knee Story. (2 Cs, M, F, felt for grass, sponge for rock.)

T: "O.K. I have an idea for another story. You put our family there and get them ready for the next one while I put these away." (T points to the side of the table; see below. It is important that the rest of the family be about 30 cm away from the rock the story child will climb.)



"O.K. Look what I've got." (Set out piece of green felt and sponge rock.) "This is the park. Do you sometimes go to the park with your mom and dad?" "Here is our family and they're out walking in the park, and at this park there is this high, high rock."

C: "Look, mommy and daddy. Watch me climb this high, high rock." (Make child figure climb rock, then fall off.) "Boo-hoo (or ouch), I've hurt my knee (crying voice)."

T: "Show me what happens now."

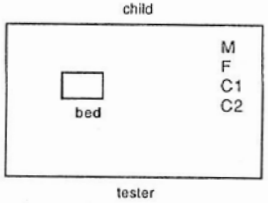
T prompt (if subject does not spontaneously mention): "What do they do about the hurt knee?") For other prompts, see "spilled juice" story, i.e., ask what the figures are doing if it's not accompanied by speech, ask the subjects to show you what they say the figures are doing, and prompt for elaboration by saying things like "Anything else?" "And then what?" etc.

If the subject seems to have finished, or becomes repetitive, say:

T: "All done? Shall we try another? Let's put these away."

Monster in the Bedroom Story. (2 Cs, M, F, bed with felt blanket.)

T: "Can you get the family ready for the next one?" (Set out the props as below, if subject does not do it. Again, it is important to have the rest of the family at least 30 cm from the bed in the "bedroom.")



T: "Look what happens now. Listen carefully."

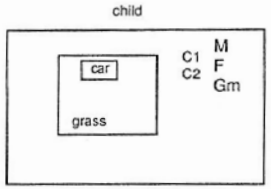
M: (Face M toward story child and move her slightly as she speaks.) "It's bedtime. Go up to your room and go to bed."

F: "Go up to bed now." (Same action as with M, deep voice.)
C: "O.K., mommy and daddy, I'm going." (Make child figure walk to bed.)
T comment: "Bob goes upstairs to his room, and he goes":
C: "Mommy! Daddy! There's a monster in my room! There's a monster in my room!" (Alarmed tone of voice.)
T: "Show me what happens now."

T prompt if subject does not mention spontaneously, "What do they do about the monster in the room?" If necessary, use other prompts given in "spilled juice" story, i.e., ask for clarification of ambiguous action, ask subjects to show you actions they simply described, and for elaboration by saying "Now what?" "Anything else?" etc. If the subject stops playing, or becomes overly repetitive, move on by saying:
T: "Are you ready for the next one?"

Departure Story. (2Cs, M, F, GM, felt grass, box as car.)

T: "Let's use the grandmother this time." (Set out family and grandmother at side of table, with green felt and car as below; it is important to have the car in front of the subject, and the two parents facing the grandmother and two children.)



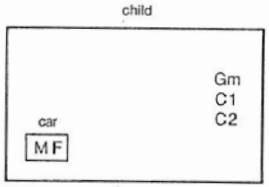
T: "Here we have their front lawn, and here we have their car, this is the family car." (Make mom and dad face the children and grandma, with car in front of subject.)
T: "You know what it looks like to me, (subject's name). It looks like the mommy and the daddy are going on a trip."
M: "O.K. boys (girls). Your dad and I are going on a trip. We are leaving on our trip now." (Move M slightly as she speaks to the children.)
F: "See you tomorrow. Grandma will stay with you." (Move F slightly like M.)
T: "Show me what happens now."

Important: T should let the subject put the figures in the car and make the car drive off. Only intervene if the subject seems unable to make the car drive off. If the subject puts the children in the car say, "No, only the mom and dad are going." After the subject (or if necessary, the tester) makes the car drive off, T puts the car under the table, out of sight. If the subject wants to retrieve the car, T replies, "No, they're not coming back yet."
T: "And away they go." (As the car is moved under the table.)

T prompt if subject does not spontaneously mention, "What do the children do while the mom and dad are gone?" and use other prompts to clarify actions, or actors, and to ask subject to act out what is being described.

Reunion Story. (Same Props as departure story.)

Bring the car with the two parents back out from under the table and set it on table at a distance from the family (i.e., keep it near T, so the subject has to reach for it and can make it drive "home"). If the subject has put the child and grandmother figures in the middle of the table during the previous story, put them back close to the subject to create distance between the returning car and the child figures).



T: "O.K. And you know what? It's the next day and the grandma looks out of the window (make grandma look toward car, move her as she speaks) and she goes":
GM: "Look boys (girls), here come your mommy and daddy. They're home from their trip."
T: "Show me what happens now." (Let subject drive car toward "home," intervene only if the subject does not do so.)

Prompt if subject does not spontaneously take the figures out of the car. "What do we do now that the mom and dad are home?" Also use other prompts given in "spilled juice" story where appropriate.

If the subject asks for other props, like a bed, etc., bring it out. However, do not bring out the grandmother during the earlier stories. Just say, "She'll come back later" or "We'll use her in another story later." It is very important to adhere to the spatial arrangements suggested in each story, especially the distance between parent and child figures in the hurt knee, monster, and reunion stories.

References

Ainsworth, M. D. S., & Bell, S. M. (1974). Mother-infant interaction and the development of competence. In K. J. Connolly & J. Bruner (eds.), *The growth of competence*. New York: Academic Press.

Ainsworth, M. D. S.; Bell, S. M.; & Stayton, D. (1974). Infant-mother attachment and social development: "Socialization" as a product of reciprocal responsiveness to signals. In M. P. M. Richards (ed.), *The integration of the child into a social world*. London: Cambridge University Press.

Appendix B

Kern's adaptation of the ASCT for middle childhood

New stories for Doll Play Interview (Kathy Kerns)

Note: only the target child and one parent is represented in the story. Dolls are labeled as target child and mother.

School Assistance (new first story)

set-up: a kitchen and a living room. target child only is at kitchen table. Mother is in the living room watching TV. (Set up so mother's back is to the child.)

Story:

Susi is working on a homework project that is due tomorrow. At first, things were going really well, but now she's having a lot of trouble, and it is getting late. She's worried that she might not be able to finish it before bedtime. Show me what happens next.

Fight with a Friend (new second story)

set-up: mother only is in the living room on the couch. Grass on the table to show outside, because child will just be coming home. At end of story, child doll should be just getting ready to enter the house.

Story:

Susi was over at a friend's house playing. She and her friend got into a big fight, and her friend told her to leave. Susi is just getting home now. She goes inside the house and slams the door. Her mom says (in a neutral tone of voice), "Is that you, Susi?" Show me what happens next.

Appendix C

THE ASCT SCORING SHEET

The Granot and Mayseless (1999, 2001) coding manual as well as the modifications made by Kerns and colleagues (Kerns, Abraham, Schlegelmilch & Morgan, 2007; Kerns, Brumariu & Seibert, 2011; Kerns, 2013) informed the coding process. The training and coding manuals can be obtained from and used with permission from the authors.

Before scoring read the transcript carefully or watch the video recording. Each story is rated secure or insecure with three additional rating scales included for the Departure and Reunion stories. After reading the transcript or viewing the recording, comment on the following four aspects for each story a) expression and regulation of feelings, b) relationship with caregivers (for 8 to 9 year olds) or coordination of action (for 10 to 12 year olds), c) narrative coherence and d) constructive resolution to problems. Indicate characteristics of the different attachment strategies (i.e. 'open and flexible' for secure, 'heightening' for ambivalent, 'minimizing' for avoidant, 'chaotic' for disorganized and 'power driven' for unattached).

Prototypical secure attachment stories as well as the prototypes of the different insecure attachment categories are used to guide the rater. Once all the stories have been rated according to the four aspects, rate the extent to which the narratives are similar to each of the 5 prototypes using a five-point Likert scale.

1	no signs of pattern	no aspects appear
2	one or two signs of pattern	one or two aspects appear once or twice in the stories
3	shows resemblance but lacks some elements	all aspects appear but only in some stories
4	clear resemblance	all four aspects appear and
5	prototypical	each story reflects at least one aspect

Choose the dominant strategy and indicate elements of other strategies.

Rating		**Secure**	**Avoidant**	**Ambivalent**	**Disorganized**
Prototypical		5	5	5	5
Clear resemblance	4	4	4	4	
Shows resemblance but lacks some elements	3	3	3	3	
One or two signs of pattern	2	2	2	2	
No signs of pattern	1	1	1	1	

One score must be higher than the others

NOTE: For a secure classification to be made at least three out of five of the stories must be coded as secure including the Departure, Reunion or Fight with a friend story. For a specific insecure or unattached classification to be made at least two stories must receive the same coding. If elements of all prototypes are pronounced or appear to a similar extent, a disorganized classification can be made. Where a rater has difficulties deciding on a rating, half scores can be used.

Coding Sheet

Site: _____ **Date of administration:** _____

Code: _____ **Age:** _____

Story Stem: Spilled Juice

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Secure: _____ Insecure:

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story Stem: Hurt Knee

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Secure: _____ Insecure:

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story Stem: Monster or Something in my room

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Secure: _____ Insecure:

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story stem: Departure Story

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Coping while mother is away:

5. Extremely secure Coping 4. Secure coping 3. Coping Withdrawal 2. Insecure coping 1. Extremely insecure coping

Relationship with alternative attachment figure - grandmother or babysitter:

5. Well distinguished Relationship 4. Well organized relationship 3. Reasonable relationship 2. Dysfunctional relationship 1. Disturbed relationship

Secure: _____ Insecure:

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story stem: Reunion Story

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Child's behaviour during the reunion:

5. Extremely secure Coping | 4. Secure coping | 3. Secure coping with insecure elements | 2. Insecure coping | 1. Extremely insecure coping

Secure: _____ Insecure: _____

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story stem: Homework task

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Secure: _____ Insecure: _____

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Story stem: Fight with a friend

Expression and regulation of emotion:

Relationship with caregiver / Coordination of action:

Narrative coherence:

Constructive resolution of problems:

Secure: _____ Insecure: _____

Secure: __ Avoidant: _____ Ambivalent: _____ Disorganized: _____ Unattached: _____

Overall Rating		**Secure**	**Avoidant**	**Ambivalent**	**Disorganized**
Prototypical		5	5	5	5
Clear resemblance	4	4	4	4	
Shows resemblance but lacks some elements	3	3	3	3	
One or two signs of pattern	2	2	2	2	
No signs of pattern	1	1	1	1	
		One score must be higher than the others			

For a secure classification to be made the Departure, Reunion or Fight with a Friend story must be rated as a secure.

Appendix D. 1

SOCIAL COGNITION AND OBJECT RELATIONS GLOBAL

RATING FORM

Please rate the patient on each of the following dimensions, using the 1-7 scales indicated. Each scale is on a continuum, with higher scores indicating more mature or healthy functioning.

Complexity of representations of people: 1 = tends to be grossly egocentric, or to confuse his/her own thoughts, feelings, or attributes with others'; 3 = views the self and others with little subtlety or complexity; descriptions of people tend to be sparse, simple, one-dimensional, poorly integrated, or split into all-good or all-bad (e.g., tends to describe people as “nice,” “mean,” etc.); 5 = views of the self and others have some depth and complexity but are relatively conventional; is able to see people's strengths as well as weaknesses, and to take others' perspective; 7 = is psychologically minded; views of people are subtle, rich, and complex. 1_____2_____3_____4_____5_____6_____7_____
Affective quality of representations: (what the person expects from, and experiences in, relationships): 1 = tends to have malevolent expectations of relationships; often experiences people as abusive or intentionally destructive; 3 = tends to experience relationships as somewhat unpleasant, hostile, or indifferent, or to feel very alone; 5 = expectations of relationships are affectively mixed; tends to describe both positive and negative relationship experiences; 7 = has genuinely positive expectations of relationships, but is not "pollyannish" (i.e., can see people for what they are). Note: Where affective quality of representations of relationships tends to be bland, absent, limited, or defensively positive, code "4." 1_____2_____3_____4_____5_____6_____7_____
Capacity for emotional investment in relationships: 1 = tends to focus primarily on his/her own needs in relationships; to have unstable, tumultuous relationships; or to have few if any relationships; 3 = relationships tend to be shallow, lacking in depth, or based primarily on mutual participation in shared activity or mutual self-interest; 5 = demonstrates conventional sentiments of friendship, caring, love, and empathy in relationships; 7 = tends to have deep, committed relationships characterized by mutual

sharing, emotional intimacy, interdependence, respect, and appreciation.

1_____2_____3_____4_____5_____6_____7_____

Emotional investment in values and moral standards: 1 = evidences a relative absence of moral values and concerns for the needs of others; may behave in selfish, inconsiderate, self-indulgent, or aggressive ways with little sense of remorse or guilt; 3 = shows signs of *some* internalization of standards (e.g., avoids doing “bad” things because knows others will think badly of him/her; thinks in relatively simple or childlike ways about right and wrong") but lacks mature feelings of guilt or remorse for wrongdoing and a capacity to override own desires that regulate behavior; 5 = is invested in moral values and experiences guilt for hurting other people or failing to meet moral standards; has conventional moral views; 7 = thinks about moral questions in a way that combines abstract thought, a willingness to challenge or question convention, and genuine compassion and thoughtfulness in actions. Note: Where the person is morally harsh and rigid toward self or others, code "4."

1_____2_____3_____4_____5_____6_____7_____

Understanding of social causality *(ability to understand why people do what they do)*: 1 = explanations of people's behavior or narrative accounts of interpersonal experiences tend to be confused, confusing, distorted, extremely sparse, or difficult to follow; "stories" of events tend to lack coherence; 3 = explanations of people's behavior or narrative accounts of interpersonal events tend to be slightly confusing; descriptions of interpersonal events often have incongruities that require "work" to understand fully; 5 = tends to provide straightforward narrative accounts of interpersonal events in which people’s actions result from the way they experience or interpret situations; 7 = tends to provide rich, coherent, and accurate accounts of interpersonal events. Note: where the person tends to describe interpersonal events as if they "just happen," with little sense of why people behave the way they do (i.e., *alogical* rather than *illogical* narratives, which seem to lack any causal understanding), rate "2."

1_____2_____3_____4_____5_____6_____7_____

Experience and management of aggressive impulses: 1 = is physically assaultive, destructive, sadistic, or in poor control of aggressive impulses; 3 = tends to be angry, passive-aggressive, denigrating of others, physically abusive to self, or unable to protect self from escapable abuse; 5 = avoids dealing with anger by denying it, defending against it, or avoiding confrontations; 7 = can express anger and

aggression and assert him/herself appropriately. 1_____2_____3_____4_____5_____6_____7_____
Self-esteem: 1 = views self as loathsome, evil, rotten, contaminating, or globally bad; 3 = has low self-esteem (e.g., feels inadequate, inferior, self-critical, etc.); 5 = displays a range of positive and negative feelings toward the self; 7 = tends to have realistically positive feelings about him/herself. Note: where person is grandiose, or alternates between overvaluation and devaluation of self, rate "4." 1_____2_____3_____4_____5_____6_____7_____
Identity and coherence of self: 1 = has multiple personalities; 3 = views of, or feelings about, the self fluctuate widely or unpredictably; lacks stable goals, ambitions, or core values; has an unstable sense of self; feels as if s/he "doesn't know who s/he is"; 5 = identity and self-definition are not a major concern or preoccupation; 7 = feels like an integrated person, with stable commitments to long-term ambitions, goals, values, and relationships. 1_____2_____3_____4_____5_____6_____7_____

Appendix D. 2

NO:

SOCIAL COGNITION AND OBJECT RELATIONS GLOBAL

SCORING SHEET

TAT STORIES CODED: 1, 2, 3BM, 7GF, 8BM, 9GF, 12M, 14 (8 stories)

Complexity of representation of people:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Affective quality of representations:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Emotional investment in relationships:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Experience and management of aggressive impulses:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Self-esteem:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Identity and coherence of self:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
7.	1	2	3	4	5	6	7
8.	1	2	3	4	5	6	7
9.	1	2	3	4	5	6	7
12.	1	2	3	4	5	6	7
14.	1	2	3	4	5	6	7

Appendix E.1

DES-IV questionnaire

The Differential Emotions Scale for children and adolescents (DES

The instructions will be read to the children participating in the study.

Four items in the scale have been revised as follows:
Item 3A: Feel alert, kind of curious about something.
Item 21A: Feel like you are better than somebody.
Item 24A: Feel afraid.
Item 25A: Feel ashamed, like you want to disappear.

Table 10.4. *Instructions for and completion of the scale and sample DES items*

The DES is a list of words that you can use to show how you feel. Each question asks you about a different feeling. We want you to tell us how often you felt each of these feelings *during the past week*. You can tell us how often you felt each of the feelings on the list by marking one of the letters next to each question.

Here is an example for you to think about. How often did you feel cheerful during the past week?
If you *rarely or never* felt cheerful during the past week, then you circle the letter A.
If you *hardly ever* felt cheerful during the past week, then you circle the letter B.
If you *sometimes* felt cheerful during the past week, then you circle the letter C.
If you *often* felt cheerful during the past week, then you circle the letter D.
If you *very often* felt cheerful during the past week, then you circle the letter E.

Now you are ready to read the questions on the list. Read each question and mark your answer. When you are finished check to see that you have answered all thirty questions. It is important that you give an answer to each question.

How often did you	Rarely or never	Hardly ever	Sometimes	Often	Very often
1. Feel regret, sorry about something you did	A	B	C	D	E
2. Feel glad about something	A	B	C	D	E
3. Feel like something stinks, puts a bad taste in your mouth	A	B	C	D	E

Note: The complete DES III can be constructed by randomly ordering the items as they appear in Table 10.2, substituting the revised items 3A, 21A, 24A, and 25A listed at the end of the section "Method."

Factor	Item content: In your daily life, how often do you
I. Interest	Feel like what you're doing or watching is interesting
	Feel so interested in what you're doing, caught up in it
	Feel alert, curious, kind of excited about something
II. Enjoyment	Feel glad about something
	Feel happy
	Feel joyful, like everything is going your way, everything is rosy
III. Surprise	Feel surprised, like when something suddenly happens you had no idea would happen
	Feel amazed, like you can't believe what's happened, it was so unusual
	Feel like you feel when something unexpected happens
IV. Sadness	Feel unhappy, blue, downhearted
	Feel sad and gloomy, almost like crying
	Feel discouraged, like you can't make it, nothing is going right
V. Anger	Feel like screaming at somebody or banging on something
	Feel angry, irritated, annoyed
	Feel mad at somebody
VI. Disgust	Feel like something stinks, puts a bad taste in your mouth
	Feel disgusted, like something is sickening
	Feel like things are so rotten they could make you sick
VII. Contempt	Feel like somebody is a low-life, not worth the time of day
	Feel like somebody is a "good-for-nothing"
	Feel like you are better than somebody
VIII. Fear	Feel scared, uneasy, like something might harm you
	Feel fearful, like you're in danger, very tense
	Feel afraid, shaky, and jittery
IX. Guilt	Feel regret, sorry about something you did
	Feel like you did something wrong
	Feel like you ought to be blamed for something
X. Shame	Feel embarrassed when anybody sees you make a mistake
	Feel like people laugh at you
	Feel like people always look at you when anything goes wrong
XI. Shyness	Feel sheepish, like you do not want to be seen
	Feel shy, like you want to hide
	Feel bashful, embarrassed
XII. Hostility Inward	Feel you can't stand yourself
	Feel mad at yourself
	Feel sick about yourself

Appendix E.2

DIFFERENTIAL EMOTIONS SCALE-IV SCORING SHEET

Code:

Site:

Factor	Question	Rarely/ Never	Hardly Ever	Sometimes	Often	Very Often
I. Interest	1					
	2					
	3					
II. Enjoyment	1					
	2					
	3					
III. Surprise	1					
	2					
	3					
IV. Sadness	1					
	2					
	3					
V. Anger	1					
	2					
	3					
VI. Disgust	1					
	2					
	3					
VII. Contempt	1					
	2					
	3					
VIII. Fear	1					
	2					
	3					
IX. Guilt	1					
	2					
	3					
X. Shame	1					

	2					
	3					
XI. Shyness	1					
	2					
	3					
XII. Hostility Inward	1					
	2					
	3					

Appendix F.1

CADS complete version

Scale of Coping Styles of Children and Adolescents - Revised (CSCA-R)
Male Version
Revised

(Laor, N., Wolmer, L., Radzynski, M.)

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The following sentences describe different kinds of behavior children display at different times. Please think about **your own child**, and using the following scale, indicate **to what extent each sentence characterizes him:**

Never	Rarely	Sometimes	Frequently
Not at all like him	**A little like him**	**Somewhat like him**	**Very much like him**
0	1	2	3

For example, regarding the sentence "When happy expresses his feelings openly", your consideration would be as follows: if expressing his feelings openly when happy is **very much like** your child, or happens **frequently**, you should circle the number "**3**"; if expressing his feelings openly when happy is **somewhat like him**, or happens **sometimes**, you should circle the number "**2**"; if expressing his feelings openly when happy is **a little like him**, or happens **rarely**, you should circle the number "**1**"; if expressing his feelings openly when happy is **not at all like him**, or **never** happens, you should circle the number '**0**".

Please read each sentence below and circle the appropriate number. **Remember** that in this questionnaire **there are no correct or incorrect answers**. Please give the **best description of your child**.

Thank you for your collaboration.

Name of child : _____

Age: _____

Gender: Male

Never Not at all like him 0	Rarely A little like him 1	Sometimes Somewhat like him 2	Frequently Very much like him 3

1.	Easily provoked, and reacts by losing his temper. _____	0	1	2	3
2.	In order to better cope with problems on his own, turns to others for advice.	0	1	2	3
3.	Helps people in trouble without letting them take advantage of him. _____	0	1	2	3
4.	Prepares himself before events that make him anxious. _____	0	1	2	3
5.	Gets very upset with himself when things do not turn out his way. _____	0	1	2	3
9.	Suddenly loses his voice when he has to speak in public. _____	0	1	2	3
10.	When frightened about an activity, gets involved in it so that he can overcome his fear. _____	0	1	2	3
11.	When someone hurts him, does not recognize it until much later. _____	0	1	2	3
13.	Despises people that he is disappointed in. _____	0	1	2	3
14.	When somebody hurts him, responds by hurting someone else. _____	0	1	2	3
15.	Has trouble organizing his thoughts under stress (e.g. is confused or blanks Out). _____	0	1	2	3
20.	During times of fear or sadness, retreats into an imaginary world. _____	0	1	2	3
21.	Cracks jokes that do not put anyone down in order to lighten a stressful Situation. _____	0	1	2	3
22.	In times of stress, complains about physical problems and cannot be Comforted. _____	0	1	2	3
23.	He is fully dependent on people he looks up to. _____	0	1	2	3
24.	Deals with stressful situations by using behaviors learned from his role Models. _____	0	1	2	3
25.	When he talks about upsetting events, does not show any sadness. _____	0	1	2	3
27.	When faced with a challenge, acts like he is more powerful or talented than He realy is, more than anyone else. _____	0	1	2	3
28.	When asked to do something he dislikes, such as homework or cleaning his room, says he will, but in fact he does not. _____	0	1	2	3
29.	When he does not succeed, claims that others treated him unfairly. _____	0	1	2	3
31.	When confronted about his bad behavior, comes up with "logical" arguments to explain it. _____	0	1	2	3
32.	When expected to be upset about a demand, is surprisingly happy to take it on.	0	1	2	3
33.	When frustrated that he cannot complete a task, behaves in ways that are typical of younger children. _____	0	1	2	3

Never Not at all like him 0	Rarely A little like him 1	Sometimes Somewhat like him 2	Frequently Very much like him 3

34. Has difficulty talking about or remembering past unpleasant experiences. __	0	1	2	3
36. In emotional situations describes his feelings in clear and accurate way. ____	0	1	2	3
38. Complains about not feeling well when he has to do something that makes him nervous, such as going to school or to camp, or taking a test. _____	0	1	2	3
39. In an argument, sees others as either with him or against him. _____	0	1	2	3
40. When frustrated that he cannot do what he wants to do, is flexible about seeking socially acceptable alternatives. _____	0	1	2	3
41. When he gets angry, waits until he is calmer rather than acting impulsively. _	0	1	2	3
42. Gets very angry when others don't fully comply with his demands. _____	0	1	2	3
43. When things do not go his way, closes up and prefers to be alone. _____	0	1	2	3
44. Does what he feels like right away, without worrying about what others might think. _____	0	1	2	3
45. During difficult times, relies on others without becoming fully dependent on them. _____	0	1	2	3
46. Is attentive to others in distress and comforts them. _____	0	1	2	3
47. When faced with an upcoming unpleasant event, controls his anxiety by planning for the event. _____	0	1	2	3
48. Becomes angry with himself when he is criticized. _____	0	1	2	3
52. Suddenly cannot move an arm or leg when he has to perform under stress. _	0	1	2	3
53. Shows an active interest in objects that scare him so that he can master his fear. _____	0	1	2	3
54. Ignores problems until they hit him in the face. _____	0	1	2	3
56. When people make him angry, sees only their negative sides. _____	0	1	2	3
57. In a stressful situation, takes his feelings out on an unrelated person or object.	0	1	2	3
58. Gets so wrapped up in his own thoughts or feelings that he becomes clumsy._	0	1	2	3
63. When faced with a difficult task, daydreams instead of dealing with it. ____	0	1	2	3
64. When somebody hurts him, improves the situation by kidding around, but does not make a fool of himself. _____	0	1	2	3
65. When he fears being left alone, demands company because of an intense concern about getting sick. _____	0	1	2	3
66. When people he admires fail him, can not see their weaknesses. _____	0	1	2	3

Never Not at all like him 0	Rarely A little like him 1	Sometimes Somewhat like him 2	Frequently Very much like him 3

67.	In a conflict, chooses between good and bad behavior based on values learned from his role models. _____	0	1	2	3
68.	In an emotional situation, expresses his feelings in a distant way. _____	0	1	2	3
70.	When threatened, acts like he is stronger than he realy is and as if he cannot be hurt. _____	0	1	2	3
71.	Does not appear too upset when asked to do something he dislikes, but he seems to do it badly on purpose. _____	0	1	2	3
72.	Blames others for his mistakes. _____	0	1	2	3
74.	When embarrassed by his behavior, comes up with "explanations" to excuse himself. _____	0	1	2	3
75.	When somebody hurts him, expresses concern for that person instead of anger.	0	1	2	3
76.	When he is sad or angry, behaves in a childish way relative to his age. _____	0	1	2	3
77.	When woken up by a nightmare, does not remember the content of the dream.	0	1	2	3
79.	Shows willingless to discuss his failures without coming up with exuses.	0	1	2	3
81.	Complains about being in physical pain (e.g. having a headache or stomach ache) when he feels ignored or rejected. _____	0	1	2	3
82.	When he feels his friends are close to him, considers them all good, and when they disappoint him, considers them all bad. _____	0	1	2	3
83.	Occupies himself with a hobby, such as sports, computers, art, or music, in order to relieve stress. _____	0	1	2	3
84.	When unable to cope with a problem, waits and deals with the problem at a more appropriate time. _____	0	1	2	3
86.	When somebody hurts him in a social situation, feels uncomfortable and prefers to be alone. _____	0	1	2	3

Appendix F.2

CADS ITEMS LINKED TO DEFENCE TYPE

Acting out:				
1. Easily provoked and reacts by losing his temper.	0	1	2	3
1. Easily provoked and reacts by losing her temper.	0	1	2	3
1. When people provoke me I easily lose my temper.	0	1	2	3
44.Does what he feels like right away, without worrying about what others might think	0	1	2	3
44. Does what she feels like right away, without worrying about what others might think	0	1	2	3
44. I do what I feel like right away, without worrying about what others might think	0	1	2	3
Affiliation:				
2. In order to better cope with a new difficulty on his own, turns to others for help.	0	1	2	3
2. In order to better cope with problems on her own, turns to others for advice.	0	1	2	3
2. In order to better cope with problems on my own, I consult with others.	0	1	2	3
45. During difficult times, looks to others for help without clinging to them.	0	1	2	3
45. During difficult times, relies on others without becoming fully dependent on	0	1	2	3
Altruism:				
3. Helps others who are in trouble.	0	1	2	3
3. Helps people in trouble without letting them take advantage	0	1	2	3

of her/him.				
3. I help people in trouble without letting them take advantage of me.	0	1	2	3
46. Is attentive to others in distress and comforts them	0	1	2	3
46. Is attentive to others in distress and comforts them.	0	1	2	3
46. I am attentive to others in distress and I comfort them.	0	1	2	3
Anticipation:				
4. Gets ready for an event that makes him anxious by playing games related to the event or by talking about it.	0	1	2	3
4. Prepares herself before events that make her anxious.	0	1	2	3
4. I prepare myself before events that make me anxious.	0	1	2	3
47. When faced with an upcoming unpleasant event, controls his anxiety by asking appropriate questions about the event.	0	1	2	3
47. When faced with an upcoming unpleasant event, controls her anxiety by planning for the event.	0	1	2	3
47. When faced with an upcoming unpleasant event, I control my anxiety by planning for the event	0	1	2	3
Autosadism:				
5. Gets very upset with himself when things do not turn out his way.	0	1	2	3
5. Gets very upset with herself when things do not turn out her way.	0	1	2	3
5. I get very upset with myself when things do not turn out my way.	0	1	2	3
48. Becomes angry with himself when he is criticized.	0	1	2	3
48. Becomes angry with herself when she is criticized.	0	1	2	3
48. I become angry with myself when I am criticized.	0	1	2	3

Conversion:				
9. Suddenly loses his voice when he has to speak or sing.	0	1	2	3
9. Suddenly loses her voice when she has to speak in public.	0	1	2	3
9. I suddenly lose my voice when I have to speak in public.	0	1	2	3
52. Suddenly cannot move an arm or leg when he is in a stressful situation.	0	1	2	3
52. Suddenly cannot move an arm or leg when she has to perform under stress.	0	1	2	3
52. Under stress, I have difficulty swallowing, as if something is stuck in my throat	0	1	2	3
Counterphobia:				
10. When frightened about an activity, gets involved in it so that he can overcome	0	1	2	3
10. When frightened about an activity, gets involved in it so that she can overcome her fear.	0	1	2	3
10. When frightened about an activity, I get involved in it so that I can overcome my fear.	0	1	2	3
53. Shows an active interest in objects that scare him so that he can master his fear.	0	1	2	3
53. Shows an active interest in objects that scare her so that she can master her fear.	0	1	2	3
53. I become actively interested in objects that scare me so that I can master my fear.	0	1	2	3
Denial:				
11. When he hurts someone, refuses to acknowledge it.	0	1	2	3
11. When someone hurts her, does not recognize it until much later.	0	1	2	3
11. When someone hurts me, I do not recognize it until much later.	0	1	2	3

54. When it is obvious that he damaged something, refuses to acknowledge that it is damaged.	0	1	2	3
54. Ignores problems until they hit her in the face.	0	1	2	3
54. Ignore problems until they hit me in the face.	0	1	2	3
Devaluation:				
13. Finds faults with people that he is disappointed in.	0	1	2	3
13. Despises people that she is disappointed in.	0	1	2	3
13. I despise people that disappoint me.	0	1	2	3
56. When people make him angry, thinks they are all bad.	0	1	2	3
56. When people make her angry, sees only their negative sides.	0	1	2	3
56. When people make me angry, I see only their negative sides.	0	1	2	3
Displacement:				
14. When somebody hurts him, responds by hurting someone else.	0	1	2	3
14. When somebody hurts her, responds by hurting someone else.	0	1	2	3
14. When somebody hurts me, I take my anger out on someone else	0	1	2	3
57. In a stressful situation, takes his feelings out on an unrelated person or object.	0	1	2	3
57. In a stressful situation, takes her feelings out on an unrelated person or object.	0	1	2	3
57. In a stressful situation, I take my feelings out on an unrelated person or object.	0	1	2	3
Dissociation:				
15. Loses his capacity to focus when he is under stress (e.g. is confused or blanks out).	0	1	2	3

15. Has trouble organizing her thoughts under stress (e.g. is confused or blanks out).	0	1	2	3
15. I have trouble organizing my thoughts under stress (e.g. I become confused or black out).	0	1	2	3
58. Gets so wrapped up in his own thoughts or feelings that he becomes clumsy.	0	1	2	3
58. Gets so wrapped up in her own thoughts or feelings that she becomes clumsy.	0	1	2	3
58. I get so wrapped up in my own thoughts or feelings that I become clumsy.	0	1	2	3
Fantasy:				
20. During times of fear or sadness, retreats into an imaginary world.	0	1	2	3
20. During times of fear or sadness, retreats into an imaginary world.	0	1	2	3
20. During times of fear or sadness, I retreat into an imaginary world	0	1	2	3
63. When faced with a difficult task, daydreams instead of dealing with it.	0	1	2	3
63. When faced with a difficult task, daydreams instead of dealing with it.	0	1	2	3
63. When faced with a difficult task, I daydream instead of dealing with it.	0	1	2	3
Humor:				
21. Does something funny in order to lighten a stressful situation.	0	1	2	3
21. Cracks jokes that do not put anyone down in order to lighten a stressful situation.	0	1	2	3
21. Cracks jokes that do not put anyone down in order to lighten a stressful situation.	0	1	2	3

64. When somebody hurts him, improves the situation by making people laugh, but does not make a fool of himself.	0	1	2	3
64. When somebody hurts her, improves the situation by kidding around, but does not make a fool of herself.	0	1	2	3
64. When somebody hurts me, I improve the situation by kidding around, but do not make a fool of myself.	0	1	2	3
Hypochondriasis:				
22. In times of stress, complains about physical problems and cannot be comforted.	0	1	2	3
22. In times of stress, complains about physical problems and cannot be comforted.	0	1	2	3
22. In times of stress, I worry about my physical wellbeing and no one can comfort me	0	1	2	3
65. When he fears being left alone, demands company because of an intense concern about getting sick.	0	1	2	3
65. When she fears being left alone, demands company because of an intense concern about getting sick.	0	1	2	3
65. When I think about my health, I get very concerned that I will become sick and I look for medical attention	0	1	2	3
Idealization:				
23. He is fully dependent on people he looks up to.	0	1	2	3
23. She is fully dependent on people she looks up to.	0	1	2	3
23. I fully rely on people I look up to.	0	1	2	3
66. When people he admires fail him, he cannot see their weaknesses.	0	1	2	3
66. When people she admires fail her, she cannot see their weaknesses.	0	1	2	3
66. When people I admire fail me, I overlook their weaknesses.	0	1	2	3

Identification:				
24. Deals with stressful situations by using behaviors learned from his role models.	0	1	2	3
24. Deals with stressful situations by using behaviors learned from her role models.	0	1	2	3
24. I deal with stressful situations by using behaviors learned from my role models.	0	1	2	3
67. In a conflict, chooses between good and bad behavior based on values learned from his role models.	0	1	2	3
67. In a conflict, chooses between good and bad behavior based on values learned from her role models.	0	1	2	3
67. In a conflict, I base my behavior on values learned from my role models.	0	1	2	3
Isolation:				
25. When he talks about upsetting events, does not show any sadness.	0	1	2	3
25. When she talks about upsetting events, does not show any sadness.	0	1	2	3
25. When I talk about upsetting events, I do not feel sadness.	0	1	2	3
68. In an emotional situation, expresses his feelings in a distant way.	0	1	2	3
68. In an emotional situation, expresses her feelings in a distant way.	0	1	2	3
68. In emotional situations I express my feelings in a distant way.	0	1	2	3
Omnipotence:				
27. When with his peers, acts like he is more powerful or talented than he really is more than anyone else.	0	1	2	3
27. When with his peers, acts like she is more powerful or talented than she really is more than anyone else.	0	1	2	3

27. When faced with a challenge, I feel like I am more powerful or talented than anyone else.	0	1	2	3
70. In a fear-provoking situation, acts like he is stronger than he really is and as if he cannot be hurt	0	1	2	3
70. In a fear-provoking situation, acts like sshe is stronger than he really is and as if he cannot be hurt.	0	1	2	3
70. I am not afraid of threats because I feel strong and that I cannot be hurt.	0	1	2	3
Passive aggression:				
28. When asked to do something he dislikes, says he will, but in fact he does not.	0	1	2	3
28. When asked to do something she dislikes, such as homework or cleaning her room, she says she will, but in fact does not	0	1	2	3
28. When asked to do something I dislike, I say I will, but in fact I do not.	0	1	2	3
71. Does not appear too upset when asked to do something he dislikes, seems to do it badly on purpose.	0	1	2	3
71. Does not appear too upset when asked to do something she dislikes, seems to do it badly on purpose.	0	1	2	3
71. When asked to do something I dislike, I do not seem too upset, but I do it it badly on purpose.	0	1	2	3
Projection:				
29. When he does not succeed in a game, finds fault with the toy or with his playmate.	0	1	2	3
29. When she does not succeed, claims that others treated her unfairly.	0	1	2	3
29. When I do not succeed, it is because others treated me unfairly.	0	1	2	3
72. Blames others for his mistakes.	0	1	2	3
72. Blames others for her mistakes.	0	1	2	3

72. Others are responsible for my mistakes.	0	1	2	3
Rationalization:				
31. When confronted about his bad behavior, comes up with "logical" arguments to explain it.	0	1	2	3
31. When confronted about her bad behavior, comes up with "logical" arguments to explain it.	0	1	2	3
31. When people complain about my behavior I come up with "logical" arguments to explain it.	0	1	2	3
74. When embarrassed by his behavior, comes up with "explanations" to excuse himself	0	1	2	3
74. When embarrassed by her behavior, comes up with "explanations" to excuse herself	0	1	2	3
74. When I am embarrassed by my behavior, I come up with "explanations" to excuse myself.	0	1	2	3
Reaction formation:				
32. When expected to be upset about a demand, is surprisingly happy to take it on.	0	1	2	3
32. When expected to be upset about a demand, is surprisingly happy to take it on.	0	1	2	3
32. When it is expected that I be upset about a demand, I appear surprisingly happy to take it on.	0	1	2	3
75. When somebody hurts him, expresses concern for that person instead of anger.	0	1	2	3
75. When somebody hurts her, expresses concern for that person instead of anger.	0	1	2	3
75. When somebody hurts me, I feel concern for that person instead of anger.	0	1	2	3
Regression:				

33. When frustrated that he cannot complete a task, acts like a baby.	0	1	2	3
33. When frustrated that she cannot complete a task, behaves in ways that are typical of younger children.	0	1	2	3
33. When I am burdened by a frustrating task, I do not act like an adult.	0	1	2	3
76. When he is sad or angry, acts like a baby.	0	1	2	3
76. When she is sad or angry, behaves in a childish way relative to her age.	0	1	2	3
76. When I am sad or angry, I do not act like an adult.	0	1	2	3
Repression:				
34. Has difficulty talking about or remembering past unpleasant experiences.	0	1	2	3
34. Has difficulty talking about or remembering past unpleasant experiences.	0	1	2	3
34. I have difficulty talking about or remembering past unpleasant experiences.	0	1	2	3
77. When woken up by a nightmare, does not remember the content of the dream.	0	1	2	3
77. When woken up by a nightmare, does not remember the content of the dream.	0	1	2	3
77. When woken up by a nightmare, I do not remember the content of the dream.	0	1	2	3
Self-observation				
36. In emotional situations describes his/her feelings in a clear and accurate way.	0	1	2	3
36. In emotional situations describes his/her feelings in a clear and accurate way.	0	1	2	3
36. In emotional situations I describe my feelings in a clear and accurate way.	0	1	2	3

79. Shows willingness to discuss his/her failures without coming up with excuses.	0	1	2	3
79. Shows willingness to discuss his/her failures without coming up with excuses.	0	1	2	3
79. When confronted about my failures I discuss them openly and do not come up with excuses.	0	1	2	3
Somatization:				
38. Complains about not feeling well when he has to do something that makes him nervous, such as parting from a parent.	0	1	2	3
38. Complains about not feeling well when she has to do something that makes her nervous, such as parting from a parent.	0	1	2	3
38. I feel sick when I have to do something that makes me nervous.	0	1	2	3
81. Complains about being in physical pain (e.g. having a headache or stomach ache) when he feels ignored or rejected.	0	1	2	3
81. Complains about being in physical pain (e.g. having a headache or stomach ache) when she feels ignored or rejected.	0	1	2	3
81. I feel physical pain (e.g. a headache or stomach ache) when I am ignored or rejected.	0	1	2	3
Splitting:				
39. In an argument, sees others as either with him or against him.	0	1	2	3
39. In an argument, sees others as either with her or against her.	0	1	2	3
39. In an argument, I view others as either with me or against me.	0	1	2	3
82. When he feels his friends are close to him, considers them all good, and when they disappoint him, considers them all bad.	0	1	2	3
82. When he feels his friends are close to her, considers them all good, and when they disappoint her, considers them all bad.	0	1	2	3

82. When I feel my friends are close to me, I do not see their faults, and when they disappoint me, I do not see their good qualities.	0	1	2	3
Sublimation:				
40. When frustrated that he cannot do what he wants, is flexible about seeking socially acceptable alternatives.	0	1	2	3
40. When frustrated that she cannot do what she wants, is flexible about seeking socially acceptable alternatives.	0	1	2	3
40. When I get frustrated that I cannot do what I want, I am flexible about seeking socially acceptable alternatives.	0	1	2	3
82. When he feels his friends are close to him, considers them all good, and when they disappoint him, considers them all bad.	0	1	2	3
82. When he feels his friends are close to her, considers them all good, and when they disappoint her, considers them all bad.	0	1	2	3
82. When I feel my friends are close to me, I do not see their faults, and when they disappoint me, I do not see their good qualities.	0	1	2	3
Suppression:				
41. When he gets angry, waits until he is calmer rather than acting impulsively.	0	1	2	3
41. When she gets angry, waits until she is calmer rather than acting impulsively.	0	1	2	3
41. When I get angry, I postpone my response until I am calmer rather than acting impulsively.	0	1	2	3
84. When it is inappropriate to ask for something he wants very badly, waits for a more appropriate moment to ask.	0	1	2	3
84. When unable to cope with a problem, waits and deals with the problem at a more appropriate time.	0	1	2	3
84. When unable to cope with a problem, I wait and deal with it at a more appropriate time.	0	1	2	3

Withdrawal:				
43. When things do not go his way, closes up and prefers to be alone.	0	1	2	3
43. When things do not go her way, closes up and prefers to be alone.	0	1	2	3
43. When things do not go my way, I close up and prefer to be alone.	0	1	2	3
86. When somebody hurts him in a social situation, feels uncomfortable and prefers to be alone.	0	1	2	3
86. When somebody hurts her in a social situation, feels uncomfortable and prefers to be alone.	0	1	2	3
86. When somebody hurts me in a social situation, I feel uncomfortable and prefer to be alone.	0	1	2	3

Appendix F.3

COMPREHENSIVE ASSESSMENT OF DEFENSE STYLES (CADS) SCORING SHEET

Completed by (e.g. mother or guardian):_____

Please highlight the appropriate box: Never Rarely Sometimes Frequently

0 1 2 3

Example

a. *Dan* is easily provoked, and reacts by losing his temper 0 1 2 3

1. Helps people in trouble without letting them take advantage of him 0 1 2 3
2. When someone hurts him/her, does not recognize it until much later. 0 1 2 3
3. Despises people that he is disappointed in. 0 1 2 3
4. Cracks jokes that do not put anyone down in order to lighten a stressful Situation 0 1 2 3
5. He is fully dependent on people he looks up to. 0 1 2 3
6. Deals with stressful situations by using behaviours learned from his/her role models. 0 1 2 3
7. When faced with a challenge, acts like he/she is more powerful or talented than he/she really is, and more than anyone else. 0 1 2 3
8. When asked to do something he/she dislikes, such as homework or cleaning, he/she says they will but in fact does not. 0 1 2 3
9. When he/she does not succeed, claims that others treated him unfairly. 0 1 2 3
10. Complains about not feeling well when he/she has to do something that makes them nervous, such as going to school or away from home, or taking a test. 0 1 2 3
11. In an argument, sees others as either against him/her or with him/her. 0 1 2 3
12. When he/she gets angry, waits until he is calmer rather than acting impulsively. 0 1 2 3

13. When things do not go his/her way, closes to and prefers to be alone. 0 1 2 3

14. Is attentive to others in distress and comforts them. 0 1 2 3

15. Ignores problems until they hit him/her in the face. 0 1 2 3

16. When people make him angry, sees only their negative sides. 0 1 2 3

17. When somebody hurts him/her, improves the situation by kidding around, but does not make a fool of himself/herself. 0 1 2 3

18. When people he admires fail him, cannot see their weaknesses. 0 1 2 3

19. In a conflict, chooses between good and bad behaviour based on values learned from his/her role models. 0 1 2 3

20. When threatened, acts like he/she is stronger than he/she really is, and as if he/she cannot be hurt. 0 1 2 3

21. Does not appear too upset when asked to do something he/she dislikes, but seems to do it badly on purpose 0 1 2 3

22. Blames others for his/her mistakes 0 1 2 3

23. Complains about being in physical pain (e.g. headache or stomach pains) when he/she feels ignored or rejected 0 1 2 3

24. When he/she feel his/her friends are close to him/her, they are considered to be all good, but when they disappoint him, they are considered to be all bad. 0 1 2 3

25. When unable to cope with a problem, waits and deals with the problem at a more appropriate time. 0 1 2 3

26. When somebody hurts him/her in a social situation, feels uncomfortable and prefers to be alone. 0 1 2 3

PLEASE ANSWER ALL THE QUESTIONS

Appendix G

Haworth's Analysis of Adaptive Functioning rating form

Spivack, G., Levine, M., & Brenner, B. Sex, verbal style and the use of the semantic differential. Report to Nat. Inst. Ment. Hlth. M-4044, 1961.

Starer, E. Cultural symbolism: A validity study. *J. consult. Psychol.*, 1955, *19*, 453-454.

Stennett, R. G., & Thurlow, M. Cultural symbolism: The age variable. *J. consult. Psychol.*, 1958, *22*, 496.

Triandis, H. C., & Osgood, C. E. A comparative factorial analysis of semantic structures in monolingual Greek and American college students. *J. abnorm. soc. Psychol.*, 1958, *57*, 187-196.

Zax, M., & Loiselle, R. H. Stimulus value of Rorschach inkblots as measured by the semantic differential. *J. clin. Psychol.*, 1960, *16*, 160-163.

Received October 16, 1962

A Schedule for the Analysis of CAT Responses

MARY R. HAWORTH
Nebraska Psychiatric Institute

The checklist to be described has been designed primarily as an aid in the qualitative evaluation of children's CAT stories; it can also be used to furnish a rough quantitative measure for making comparisons between subjects and groups. The schedule provides a quick summary of the number and kinds of defenses employed as well as the content of items used most frequently. The categories are arranged as nearly as possible on a continuum from indicators of high control and constriction to suggestions of disorganization and loosening of ties to reality.

The schedule was initially devised as part of a previous study (Haworth, 1962) for use in evaluating the CAT responses of 30 school children from the first, second and third grades. Fifteen of these Ss comprised an experimental group on the basis of deviant responses to a group film test (Haworth and Wolfmann, 1959), while the 15 matched controls had given no deviant film responses. Using the CAT schedule, two judges agreed on the selection of 11 of the 15 experimental Ss as showing a high degree of anxiety or of obsessive indicators. Significant differences were found in the numbers of Ss from each group who made extensive use of the various categories.

Subsequently 15 children, who had been referred to a clinic[1] because of emotional problems, were matched to the original two groups on the basis of sex and school grade. Their CAT protocols were evaluated and comparisons with the school groups will be discussed. The schedule, along with directions for scoring, will be found at the end of this report.

[1] The Psychological Clinic of the Department of Psychology, Michigan State University.

DERIVATION OF SCORES

The schedule consists of ten categories of defenses, identification and other adaptive mechanisms. The number of responses which are checked under each category is compared with a pre-established cut-off point for that category[2]. If the response total exceeds the cut-off point, a "critical score" is assigned to that category. The final measure, for comparative purposes, consists of the number of categories receiving critical scores. Thus the highest number of such scores would be ten, one for each category. Presumably a high number of critical scores (8 to 10) indicates that the child is frantically employing many different mechanisms to bind his anxiety and that none of them are working adequately.

In individual qualitative assessment, the total number of responses within a category and their distribution among the various sub-items provide meaningful data for the total personality picture. The quantitative measures to be discussed here are not concerned with the magnitude of the response totals, but only with whether or not they exceed a certain amount.

GROUP COMPARISONS

The average number of critical scores for the experimental school group was 4.73 while the mean for the school controls was 1.26. The mean score for the total school sample was 3.00. For the clinic referrals the mean score was 6.73.

In the previous study (Haworth, 1962), 15 of the 30 school children

[2] Cut-off points were established on the basis of the range of responses of the 30 Ss in the school sample, with response totals in the upper (two-thirds of the range being considered "critical" (Haworth, 1962).

Analysis of Adaptive Mechanisms in CAT Responses

Mary R. Haworth, Ph.D.

Name..... Bd:..... Date:..... Age:.....

Critical Scores: .....

TOTALS

DEFENSE MECHANISMS

A. *Reaction-formation* (only one check per story)

..... 1. Exaggerated goodness or cleanliness
(A+ ..... 2. Oppositional attitudes, rebellion, stubbornness
B=5) ..... 3. Story tone opposed to picture content

B. *Undoing and Ambivalence* (only one check per story)

..... 1. Undoing
..... 2. Gives alternatives
..... 3. Indecision by *S* or story character
..... 4. Restates (e.g., "that....., no this.....;" "he was going to, but.....")

C. *Isolation*

..... 1. Detached attitude ("it couldn't happen," "it's a cartoon")
(6) ..... 2. Literal ("it doesn't show, so I can't tell.")
..... 3. Comments on story or picture ("That is hard"; "I told a good one.")
..... 4. Laughs at card, exclamations
..... 5. Use of fairy-tale, comic-book, or "olden times" themes or characters
..... 6. Describes in detail, logical, "the end"
..... 7. Specific details, names, or quotes ("four hours"; she said, ".....")
..... 8. Character gets lost
..... 9. Character runs away due to anger
..... 10. *S* aligns with parent against "naughty" child character; disapproves child's actions

D. *Repression and Denial*

..... 1. Child character waits, controls self, conforms, is good, learned lesson
(5) ..... 2. Accepts fate, didn't want it anyway
..... 3. Prolonged or remote punishments
..... 4. "It was just a dream"
..... 5. Forgets, or loses something
..... 6. Omits figures or objects from story (on No. 10, must omit mention of toilet *and* tub or washing)
..... 7. Omits usual story content
..... 8. No fantasy or story (describes card blandly)
..... 9. Refuses card

E. *Deception*

..... 1. Child superior to adult, laughs at adult, is smarter, tricks adult, sneaks, pretends, hides from, steals from, peeks at or spies on adult (only one check per story)
(3) *
..... 2. Adult tricks child, is not what appears to be (only one check per story)

F. *Symbolization*

..... 1. Children play in bed
(4) ..... 2. Sees parents in bed (#5)
..... 3. Open window (#5, #9); Dig, or fall in, a hole
..... 4. Babies born
..... 5. Rope breaks (#2); chair or crane breaks (#5); tail pulled or bitten (#4, 7)
..... 6. Rain, river, water, storms, cold
..... 7. Fire, explosions, destruction
..... 8. Sticks, knives, guns
..... 9. Cuts, stings, injuries, actual killings (other than by eating)
..... 10. Oral deprivation

(* or 2, if both are E-2 responses)

G. *Projection and Introjection*

..... 1. Attacker is attacked, "eat and be eaten"
(4) ..... 2. Innocent one is eaten or attacked
..... 3. Child is active aggressor (bites, hits, throws; do not include verbal or teasing attacks)
..... 4. Characters blame others
..... 5. Others have secrets or make fun of somebody
..... 6. *S* adds details, objects, characters, or oral themes
..... 7. Magic or magical powers

PHOBIC, IMMATURE OR DISORGANIZED

H. *Fear and Anxiety*

..... 1. Child hides from danger, runs away due to fear
(3) ..... 2. Fears outside forces (wind, ghosts, hunters, wild animals, monsters)
..... 3. Dreams of danger
..... 4. Parent goes away, or doesn't want child
..... 5. Slips of tongue by *S*

I. *Regression*

..... 1. Much affect in telling story
(2) ..... 2. Personal references
..... 3. Food spilled
..... 4. Bed wetting, water splashed
..... 5. Dirt, messing, smelly
..... 6. Ghosts

J. *Controls weak or absent*

..... 1. Bones, blood
(1) ..... 2. Poison
..... 3. Clang or nonsense words
..... 4. Perseveration of unusual content from a previous story
..... 5. Tangential thinking, loose associations
..... 6. Bizarre content

IDENTIFICATION

K. *Adequate, same-sex*

..... 1. *S* identifies with same-sex parent or child character
(L= ..... 2. Child jealous of, scolded or punished by, same-sex parent
or >K) ..... 3. Child loves, or is helped by, parent of opposite sex

L. *Confused, or opposite-sex*

..... 1. *S* identifies with opposite-sex parent or child character
..... 2. Child fears, or is scolded or punished by, opposite-sex parent
..... 3. Misrecognition by *S* of sex or species
..... 4. Slips of tongue with respect to sex of figures

Directions for Scoring: In the blank preceding each item, indicate with a check mark (or the card number, for future reference) any occurrence of such a response. A story may be "scored" in several categories and, except where indicated, a story may receive checks on more than one item under any one category.

After all stories have been scored, record the total number of checks for each category in the blank provided. The number in parentheses under each of these blanks indicates the *minimum* number of checks regarded as a "critical score" for that category.

For the Identification measure, the equivalent of a critical score is secured by comparing the relative number of checks for categories *K* and *L*. If the sum of checks for *L* is equal to or exceeds the sum for *K*, identification is considered to be "confused" and contributes one unit to the total of critical scores.

The final quantitative measure consists of the number of categories receiving critical scores (and *not* the total number of checks for all categories).

had critical scores in three or more areas, while only eight (all experimental) had five or more critical scores. By contrast, in the clinic group no child had fewer than four critical scores out of the possible ten, while 14

TABLE I—Frequency of Critical Scores for Each Category of the CAT Schedule

	School Control N=15	Control vs. Exper.	School Exper. N=15	Exper. vs. Clinic	Clinic N=15	Clinic vs. Control
1. Reaction & Undoing	1	****	9		10	****
2. Isolation	2	****	11		12	****
3. Repression & Denial	4		8		11	**
4. Deception	4		7		2	
5. Symbolization	1	*	6		8	***
6. Projection & Introjection	3		7		8	
7. Fear & Anxiety	2		6		8	*
8. Regression	0		2	****	10	****
9. Weak Controls	0	*	4	****	14	****
10. Identification	2	****	11		11	****

* .05 level of significance
** .025 level of significance
*** .01 level of significance
**** .005 level of significance

of the 15 clinic Ss had five or more critical scores. The X^2 for this distribution of five or more scores in clinic and school groups is 15.23 which is significant beyond the .001 level.

Table I presents a comparison of the frequency of critical scores in each category for each of the groups. Using Fisher's exact probabilities, the clinic group differed significantly from the experimental school group only in those two dimensions which represent the most pathology: Regression and Weak Controls. The clinic group differed from the school control group on all categories except Deception and Projection. The implication seems to be that these latter two categories are the ones most apt to be found in responses of children of this age group, whether or not emotional problems are present.

SCORING RELIABILITY

Two judges[3], each scoring the original 30 protocols, achieved a reliability coefficient of .88 (Rulon formula with Spearman-Brown correction). The author rescored these same 30 protocols one year later with an intra-scorer reliability coefficient of .96.

[3] Gilbert DeRath and the author.

SUMMARY

A schedule for use in evaluating children's CAT stories has been presented along with data from a presumably normal school sample and from children referred to a clinic. The clinic sample received a higher mean "score" than the school group. Within the school sample those who had previously given deviant responses to a film test had higher scores than did the controls. Comparisons were also made of the frequencies of high scores in each group for each of the ten measures in the schedule. On the basis of the present data a sum of five or more critical scores would appear to indicate enough disturbance to warrant clinical intervention. It should be re-emphasized that the chief value of the schedule is seen as providing an overall qualitative summary of the child's responses as an aid in the formulation of a personality assessment.

REFERENCES

Haworth, Mary R. Responses of children to a group projective film and to the Rorschach, CAT, Despert Fables and D-A-P. *J. proj. Tech.*, 1962, *26*, 47-60.

Haworth, Mary R. & Woltmann, A. G. *Rock-A-Bye, Baby: A group projective test for children.* (Manual and film). University Park, Pa.: Psychological Cinema Register, 1959.

Received August 27, 1962

Assessment of Body Image Organization of Hospitalized and Non-Hospitalized Subjects[1]

RAINO O. JASKAR[2]
University of Portland
and
MAX R. REED[3]
Portland State College

The role of the body image in the development of the ego, and in adult adjustments, is assigned great importance in psychoanalytic theory (Freud, 1927; Fenichel, 1945; Jung, 1931; Rank, 1929; Reich, 1949; Schilder, 1950). The body is seen not only as the nucleus of the ego (Fenichel, 1945), but also as incorporating defensive characteristics, as in Reich's (1949) motor armoring and Jung's (1931) introversion. Adler (H. L. Ansbacher & R. R. Ansbacher, 1956) also characterized maladjustment as a compensation for actual or perceived bodily inferiority, and further suggested that bodily symptoms are forwarded by the individual as rationalizations for his feelings of inferiority. More recently Fisher and Cleveland (1956) have presented an approach involving the individual's unconscious concept of his body image boundaries. Their work indicates that this vagueness-firmness dimension of body imagery is related to psychological adjustment.

The theoretical formulations cited imply multiple levels of perception and awareness of the body image which are assigned specific roles in their contributions to personality organization and development, and further, to levels of adjustment. In an attempt to make objective evaluations of some of the theoretical statements regarding the role of the body image variable, a number of tests have been devised purporting to measure the body image variable. These measures can be characterized generally as measuring the conscious-unconscious dimension, or to some extent the verbal-nonverbal levels of body influence. Previous studies (Franck, 1949; Shepler, 1951; Reed, 1957; Secord & Jourard, 1953; Fisher & Cleveland, 1956; Fisher & Cleveland, 1958; Secord, 1953) suggest that the body image variable is a complex one, that it may be related to adjustment level, and that self-report and projective measures give somewhat different results. The present study was concerned with the relationships existing between these measures and with differences between the test responses of hospitalized and non-hospitalized *Ss*.

It was proposed that: 1) sex-appropriate, well-defined body imagery is associated with positive valuation of the body; 2) various projective measures of the body image variable are correlated; and 3) non-hospitalized individuals obtain more appropriate body image scores and express more positive attitudes toward their bodies than do hospitalized *Ss*.

METHOD

Subjects. The *Ss* were thirty hospitalized and thirty non-hospitalized females ranging in age from 18 to 50. The hospitalized *Ss* were obtained from the female admissions ward of

[1] Based on a doctoral dissertation carried out under supervision of the junior author and submitted to the University of Portland in Portland in partial fulfillment of the requirements for the degree Doctor of Philosophy. Grateful acknowledgment is extended to members of the dissertation committee, Walter G. Klopfer, Sheridan P. McCabe, and Arville D. Davis.

[2] Now with the Department of Psychology, Western State Hospital, Fort Steilacoom, Washington.

[3] Formerly at the University of Portland.

Appendix H

Confidential
Vertroulik

3002

ANSWER BOOKLET **SAIS-R** ANTWOORDBOEKIE

Name/Naam: _____

Surname/Van: _____

School/Skool: _____

Date of testing/Toetsdatum: _____ Date of birth/Geboortedatum: _____

Age (years and completed months)/Ouderdom (jare en voltooide maande): _____

Sex/Geslag: _____ Standard/Standerd: _____

Language/Taal

education/onderrig: _____ home/huis: _____ testing/toetsing: _____

Parents' surname/Ouers se van: _____

Home address/Huisadres: _____

Father's occupation/Vader se beroep: _____

Mother's occupation/Moeder se beroep: _____

Domestic circumstances/Huislike omstandighede: _____

Other tests (specify)/Ander toetse (spesifiseer): _____

Referred by/Verwys deur: _____

Reason for referral/Rede vir verwysing: _____

Tester/Toetsafnemer: _____

Comments/Opmerkings: _____

_____

_____

_____

Division for Psychology in Education
Group: Education

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Published by HSRC 1992

Afdeling vir Sielkunde in Onderwys
Groep: Onderwys

© Raad vir Geesteswetenskaplike Navorsing, 1991
Alle regte voorbehou

Gedruk en uitgegee deur RGN, 1992

TEST 3: SIMILARITIES/TOETS 3: OOREENKOMSTE

DISCONTINUE the test after 4 consecutive zero scores.

STAAK die toets na 4 agtereenvolgende nultellings.

Item	Response Respons	Score Telling
1. apple - orange appel - lemoen	(assistance) (hulp)	
2. shirt - coat hemp - baadjie	(assistance) (hulp)	
3. cat - dog kat - hond		
4. spade - pick graaf - pik		
5. piano - guitar klavier - ghitaar		
6. beer - wine bier - wyn		
7. theft - murder diefstal - moord		
8. telephone - radio telefoon - radio		
9. elbow - knee elmboog - knie		
10. anger - joy woede - blydskap		
11. mountain - river berg - rivier		
12. wealth - poverty rykdom - armoede		
13. honesty - faithfulness eerlikheid - getrouheid		
14. salt - water sout - water		
15. liberal - conservative liberaal - konserwatief		

Comments/Opmerkings: _____

_____

Appendix I.1

Letter to the Chief Executive Officer (CEO) of Rahima Moosa Hospital

School of Human & Community Development

University of the Witwatersrand

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Dear _____ Date _____

CEO of Hospital

My name is Renate Gericke. I am a clinical psychologist and lecturer attached to the University of the Witwatersrand in the Discipline of Psychology within the School of Human and Community Development. Further to this and pertaining to the reason for this letter, I am a PHD student wishing to study the relationship and interrelationship between attachment types, emotion, object relations and typical defences employed.

It is hoped that the theoretical, research and clinical benefits of the diagnostic attachment classification system can be advanced and deepened by knowledge of what it means internally to have, for example, an anxious-ambivalent attachment type. What would the internal world of such a child look like? How would she or he typically interact with the environment and manage internal conflicts? Although it is recognized that attachment impaired children typically experience heightened anxiety, clinicians would be assisted in being aware of what affects, other than anticipated anxiety, are being wrestled with in attachment impaired children, as it is the working through of these feelings in relation to internal objects that can perhaps strengthen affectional bond.

In order to do this I am hoping to obtain the necessary data through two phases for each new parent-child dyad attending the clinic where the child is between 8 and 12 years old;

- administration of a parent and child questionnaire which will take approximately 45 minutes to complete during the initial history intake by myself or a postgraduate student (i.e. while clinic staff are conducting their standard interview with the child, the researcher can interview the parent or legal guardian and while clinic staff are interviewing the parents, the researcher can interview the child) and
- during the psychological assessment to administer the following TAT cards (1, 2, 3BM, 7GF, 8BM, 9GF, 11, 12M, 13B, 14) instead of the CAT and to allow me to make a copy of the TAT responses and SSAIS-R Similarities subtest scores. Research has validated the use of the TAT on a child population from age six and developed the Social Cognition and Object Relations Scale – Revised (SCOR-R) to provide a standardized means of interpreting the internal world of children (Kelly, 2007).

While participation in the study will pose no risks, all participating clinics will be provided with a summarized report on the overall findings of the research once all of the variables have been collated. Additional data

collected can be fed back to the clinic staff, thereby potentially offering benefit to the participants as clinic staff will have more information on which to build a treatment plan.

Students participating in the research will be asked to sign a confidentiality form. Further to this, if wished the researcher can sign a confidentiality form. I therefore emphasize that your patient's confidentiality will be upheld at all times. I also confirm that they will remain anonymous to all third parties.

In this regard, should you agree to grant me access to your patients, please would you fill out the consent form which is attached to this letter and I can then collect this from you. You are fully entitled to decline consent to give me access to your patients or to withdraw from consenting to such access at any time, without explanation. I confirm that participation in this study will pose no risks or benefits to you, your clinicians or your patients.

This research has been granted ethic clearance by the Medical and the Human Research Ethics Committee of the University of the Witwatersrand (clearance number: M10561).

My supervisor for this research is Prof. Carol Long who is a clinical psychologist and Associate professor within the Discipline of Psychology at the University of the Witwatersrand. She can be contacted on 011 717 4510 or carol.long@wits.ac.za .

Please contact me if you have any questions about the research.

Sincerely,

Renate Gericke

Email: renate.gericke@wits.ac.za

W: 011 717 4555

Cell: 073 279 2773

To: WITS HREC (MEDICAL)

To whom it may concern,

Pending ethical clearance from the Wits HREC (medical) I, _____ _____ (name), _____ (position), at _____ (name of institution), hereby grant permission to Renate Gericke to interview parent-child dyads attending our psychology / psychiatry clinic for the purposes of her Doctorate in Clinical Psychology research exploring relationships between attachment type, object relations, emotions and defences.

Should you have any queries, please contact me on _____ (phone) or _____ (email).

Yours faithfully,

Renate Gericke

DEPARTMENT OF HEALTH

PRIVATE BAG X20
NEWCLARE
2112

Enquiries: Mrs. S. Jordaan
Tel: (011) 470 – 9030/4
Fax: (011) 477 4117

School of Human & Community Development
University of the Witswatersrand
Private Bag 3
WITS 2050

Re: Permission to conduct a comprehensive needs assessment on relationship and interrelationship between attachment types, emotion, ego functioning, object relations and typical defenses employed.

Dear Renate Gericke

Permission is granted for you to conduct the above research as indicated in your request provided:

1. The Rahima Moosa hospital will not in anyway incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study site.
3. Strict confidentiality shall be observed at all times.
4. Informed consent shall be solicited from patients participating in your study.
5. NO file should leave the records department and/or the hospital premises.

Arrangement will be made with recordkeeping clerks so that you could occupy space in their department.

Kindly forward this office with the results of your study on completion of the research.

Yours sincerely,

pp

CHIEF EXECUTIVE OFFICER
SJ/cj. 2010-07- 20

ADDRESS: Cnr. FUEL & OUDSTHOORN STREET CORONATIONVILLE 2093

Appendix I.2

Letter to the Head of the psychology and psychiatry clinic

School of Human & Community Development

University of the Witwatersrand

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Dear _____

Head of Child Psychology / Psychiatric Unit

My name is Renate Gericke. I am a clinical psychologist and lecturer attached to the University of the Witwatersrand in the Discipline of Psychology within the School of Human and Community Development. Further to this and pertaining to the reason for this letter, I am a PHD student wishing to study the relationship and interrelationship between attachment types, emotion, object relations and typical defences employed.

It is hoped that the theoretical, research and clinical benefits of the diagnostic attachment classification system can be advanced and deepened by knowledge of what it means internally to have, for example, an anxious-ambivalent attachment type. What would the internal world of such a child look like? How would she or he typically interact with the environment and manage internal conflicts? Although it is recognized that attachment impaired children typically experience heightened anxiety, clinicians would be assisted in being aware of what affects, other than anticipated anxiety, are being wrestled with in attachment impaired children, as it is the working through of these feelings in relation to internal objects that can perhaps strengthen the affectional bond.

In order to do this, I am hoping to obtain the necessary data through two phases for all new parent-child dyads attending the clinic where the child is between 8 and 12 years old;

- administration of the parent and child questionnaires which will take approximately 45 minutes to complete during the initial history intake by myself or a postgraduate student (i.e. while clinic staff are conducting their standard interview with the child, the researcher can interview the parent or legal guardian and while clinic staff are interviewing the parents, the researcher can interview the child) and
- during the psychological assessment to administer the following TAT cards (1, 2, 3BM, 7GF, 8BM, 9GF, 12M, 14) instead of the CAT, animal form and to allow me to make a copy of the TAT responses and Similarities subtest score. Research has validated the use of the TAT on a child population from age six and developed the Social Cognition and Object Relations Scale – Revised (SCOR-R) to provide a standardized means of interpreting the internal world of children (Kelly, 2007).

I will ask that the file of each patient fulfilling the age criteria for participation will be given a unique sequential code (starting from 001). This code will be written in a book provided with the patient's name to ensure exclusivity of each code assigned and as caution - should the code mistakenly not be written in the file or on

any of the questionnaires administered, this will allow for the patient name to be linked to the correct code later on. I would like to capture the assessed child's SSAIS-R Similarities subtest scores and TAT responses and for this request access to patient files. Once all data has been collected this book will be destroyed.

While participation in the study will pose no risks, all participating clinics involved in the study will be provided with a summarized report on the overall findings of the research once all of the variables have been collated. If of interest, additional data collected can be fed back to the clinic staff, thereby potentially offering benefit to the participants as clinic staff will have more information on which to build a treatment plan.

Students participating in the research will be asked to sign a confidentiality form. Further to this, if wished the researcher can sign a confidentiality form. I therefore emphasise that your patient's confidentiality will be upheld at all times. I also confirm that they will remain anonymous to all third parties.

The Wits HREC (medical) requires written permission from each of the research sites I wish to include in my study to be provided to it before any ethical clearance certificates will be issued. In this regard, should you agree to grant me access to your patients, please would you fill out the consent form which is attached to this letter and I can then collect this from you. You are fully entitled to decline consent to give me access to your patients or to withdraw from consenting to such access at any time, without explanation. I confirm that participation in this study will pose no risks or benefits to you, your clinicians or your patients.

My supervisor for this research is Prof. Carol Long who is a clinical psychologist and Associate professor within the Discipline of Psychology at the University of the Witwatersrand. She can be contacted on 011 717 4510 or carol.long@wits.ac.za .

Please contact me if you have any questions about the research.

Sincerely,

Renate Gericke

Email: renate.gericke@wits.ac.za

W: 011 717 4555

Cell: 073 279 2773

I, CLARE HARVEY, as head of PSYCHOLOGY DEPARTMENT OF RATHIMA MOOSA HOSPITAL

hereby grant Renate Gericke permission to conduct her research in our unit on the condition that NO Department Files or contents of to be removed from Department (please specify any additional conditions).

Signed

23/07/2010

Date.

THANK-YOU FOR YOUR TIME.

Appendix J

Letter/ Information sheet to the Director or Social Work Manager at the children's homes.

School of Human & Community Development

University of the Witwatersrand

Private Bag 3, WITS, 2050

Tel: (011) 717 4555 Fax: (011) 717 4559

To whom it may concern

My name is Renate Gericke. I am a clinical psychologist and lecturer attached to the University of the Witwatersrand in the Discipline of Psychology within the School of Human and Community Development. Prior to moving to Wits full-time, I worked at The Child, Adolescent and Family Unit in Parktown for four years. Further to this and pertaining to the reason for this letter, I am a PHD student wishing to study the relationships between attachment types, emotion, object relations and typical defences employed.

Attachment understands the relationship between the primary caregiver and infant to be the foundation of psychological health. I would like to explore the child's attachment type (secure, insecure avoidant, insecure ambivalent or disorganised) in relation to how the child feels internally.

It is hoped that the benefits of the attachment classification system can be deepened by knowledge of what it means internally to have, for example, an anxious-ambivalent attachment type. What would the internal world of such a child look like? How would she or he typically interact with the environment and manage internal conflicts? Although it is recognized that attachment impaired children typically experience heightened anxiety, clinicians would be assisted in being aware of what affects, other than anticipated anxiety, are being wrestled with in attachment impaired children, as it is the working through of these feelings in relation to internal objects that can perhaps strengthen the affectional bond.

In order to do this, I am administering the following battery of tests to children between the ages of 8 and 12 years of age;

- the Attachment Story Completion Test (child completes stories), Thematic Apperception Test (picture cards the child tells stories about), the Differential Emotions Scale in which the child answers questions about how s/he has been feeling in the past week and a Similarities subtest to test for abstract reasoning skill. The battery will take approximately an hour to complete

I will also ask a care worker who knows the child well to answer a five-minute questionnaire about how the child deals with every day conflicts, problems and so forth.

While participation in the study will pose no risks, all participating sites involved in the study will be provided with a summarized report on the overall findings of the research once all of the variables have been collated. Additional data such as the Similarities subtest score can be fed back to staff, thereby potentially indicating the need for further screening.

Two masters students, Megan Robinson (educational psychology) and Lexi Plitt (clinical psychology) will be assisting with the data collection. Megan, Lexi and I will sign a confidentiality form. I therefore emphasise that your childrens' confidentiality will be upheld at all times. I also confirm that they will remain anonymous to all third parties.

If you agree to provide me with permission to interview the children, please fill out the consent form which is attached to this letter and I can then collect this from you. Alternatively you can email renate.gericke@wits.ac.za or fax it to me 011 717 4559. You can decline consent or withdraw consent to the research at any time, without explanation. I confirm that participation in this study will pose no risks or benefits to you or the children. My research supervisor is Prof Carol Long who can be contacted on 011 717 4510 or carol.long@wits.ac.za.

Please contact me if you have any questions about the research.

Sincerely,

Renate Gericke

Email: renate.gericke@wits.ac.za

W: 011 717 4555

Cell: 073 279 2773

I, _____,

in the position of _____

hereby grant Renate Gericke permission to conduct her research in our home.

_____

Signed

_____

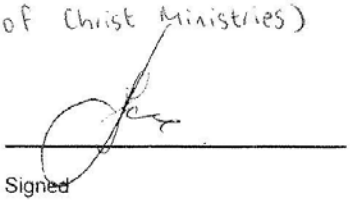
Date.

THANK-YOU FOR YOUR TIME.

I, GEERDINA (THEA) THERESA FRANCISCA JARVIS

in the position of FOUNDER / DIRECTOR

hereby grant Renate Gericke permission to conduct her research in our home. (The Love of Christ Ministries)



Signed

19/01/2011

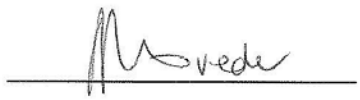
Date.

THANK-YOU FOR YOUR TIME.

I, Narisha Govende,

in the position of Director

hereby grant Renate Gericke permission to conduct her research in our home. (Johannesburg Childrens' Home)



Signed

24/1/11

Date.

THANK-YOU FOR YOUR TIME.

I, Ms R. R. Letwaba,

in the position of Deputy CEO of Sparrow Ministries

hereby grant Renate Gericke permission to conduct her research in our home.

RRLetwaba

Signed

19/01/2011

Date.

THANK-YOU FOR YOUR TIME.

I, Yolandé Bosman,

in the position of Program Manager : Social Work

hereby grant Renate Gericke permission to conduct her research in our home. (Abraham Kriel Childrens' Home)



Signed

10 / 02 / 2011

Date.

THANK-YOU FOR YOUR TIME.

Jakaranda
Kinder en Gesinsorg Maatskappy
Child and Family Care Centre
Reg. Kinderhuis/Children's Home

Privaatsak/Private Bag x11
Lynn East
0039
Talitha Kumi str
East Lynne

Tel:(012) 800-4700
Faks/Fax:(012) 800-4713
www.Jacarandachildren.co.za

NPO Reg. nr 001-649NPO
Art.21 Mpy./ Sec. 21 Co. Reg nr: 2001/016848/08

FAKS / FAX

AAN / TO : University of Witwatersrand

VIR AANDAG / FOR ATT : Renate Cericke

DATUM / DATE : 27/1/11

FAKSNO / FAX NO : 011 7174559

TOTAAL BL'E (INSL HIERDIE EEN) /
TOTAL PAGES (INCL THIS ONE) : 2

BOODSKAP / MESSAGE :

Renate

The consent for you research. Permission was granted

Vriendelike groete
VRIENDELIKE GROETE / KIND REGARDS

Bank Besonderhede/Bank Details: ABSA – Derdepoort Tak kode/Branch Code : 335245
Rek. No./Account No. : 1430140724

(Beskermhere/Patrons) : Ryk Neethling, Nico Panagio, Adv.Paul Rothmann,
(Beskermvroue/Patrons) : Berdette van Zyl, Christi Panagio

(Direkteure/Directors) : Ds/Rev JH van Loggerenberg, (Voorsitter/Chairman) : Mnr/Mr. D Steyn,
Adv SA Visser, Dr U Schiller, Me/Ms. RA Fourie, Ds/Rev DH Janse v Rensburg, Me/Ms R van Rensburg,
Mnr/Mr GL Botha, Me/Ms. M Visser, Mnr/Mr O Truter, Mnr/Mr LS de Kock,
(Uitvoerende Direkteur/ Executive Director) : Mnr/Mr T Erwee

I, Gerda v/d Merwe,

in the position of Manager: Social Work Services

hereby grant Renate Gericke permission to conduct her research in our home.

G v/d Merwe

Signed

27/1/11

Date.

THANK-YOU FOR YOUR TIME.

Appendix K

Letter to the principal of the inner-city school

School of Human & Community Development

University of the Witwatersrand

Private Bag 3, WITS, 2050

Tel: (011) 717 4500 Fax: (011) 717 4559

Dear _____ Date _____

Principal

My name is Renate Gericke. I am a clinical psychologist and lecturer attached to the University of the Witwatersrand in the Discipline of Psychology within the School of Human and Community Development. Further to this and pertaining to the reason for this letter, I am a PHD student wishing to study the relationships between attachment types, emotion, object relations and typical defences employed.

It is hoped that the theoretical, research and clinical benefits of the diagnostic attachment classification system can be advanced and deepened by knowledge of what it means internally to have, for example, an anxious-ambivalent attachment type. What would the internal world of such a child look like? How would she or he typically interact with the environment and manage internal conflicts? Although it is recognized that attachment impaired children typically experience heightened anxiety, clinicians would be assisted in being aware of what affects, other than anticipated anxiety, are being wrestled with in attachment impaired children, as it is the working through of these feelings in relation to internal objects that can perhaps strengthen the affectional bond.

In order to do this I am hoping to obtain the necessary data by interviewing parent-child dyads where the child is between 8 and 12 years old. The interviewing process will entail administration of a parent questionnaire and child interview. The parent questionnaire will take five minutes to complete and the child interview approximately an hour.

While participation in the study will pose no risks, all participating schools will receive a summary of the research findings and the parents' of participating children can receive the results of the verbal IQ subtest and if indicated, recommendations to improve verbal functioning.

Students participating in the research will be asked to sign a confidentiality form. Further to this, if wished the researcher can sign a confidentiality form. I therefore emphasise that the children's confidentiality will be upheld at all times. I also confirm that they will remain anonymous to all third parties.

You are fully entitled to decline consent to research in your school or to withdraw consent at any time, without explanation. I confirm that participation in this study will pose no risks or benefits to you or your children.

This research has been granted ethic clearance by the Medical and the Human Research Ethics Committee of the University of the Witwatersrand (clearance number: M10561).

My supervisor for this research is Prof. Carol Long who is a clinical psychologist and Associate professor within the Discipline of Psychology at the University of the Witwatersrand. She can be contacted on 011 717 4510 or carol.long@wits.ac.za .

Please contact me if you have any questions about the research.

Sincerely,

Renate Gericke

Email: renate.gericke@wits.ac.za

W: 011 717 4555

Cell: 073 279 2773

Appendix L: Hospital

L.1 Participant information sheet: Parent version

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

Dear Parent or Legal Guardian

My name is Renate Gericke, and I am doing research for the purposes of obtaining a Doctorate degree at the University of the Witwatersrand. I would like invite you to participate in the study.

I am interested in understanding the way children aged between 8 and 12 feel inside themselves better by looking at a number of variables. The variables I am looking at include how secure a child feels in his or her relationship with you, the number of different feelings s/he tends to have, how intense s/he feels things, how your child manages his or her feelings and how s/he views important people in his or her world. This will help me to answer how different children manage their anxieties and conflicts, and how different children anticipate others will respond to them. Better understanding of how children feel inside themselves will aid psychologists in helping children.

Participation in this research will entail you and your child being interviewed by me or a student under my supervision, namely Megan Robinson or Lexi Plitt. The interview will last about 45 minutes (5 minutes for the parents interview and 40 minutes for the child interview) and will be done while you or your child are being interviewed during the initial history intake or at a time convenient to you. Thus, while the clinic staff are interviewing your child, Megan, Lexi or I will interview you and while the clinic staff are interviewing you, we will interview your child. The parent questionnaire consists of 26 items and the child questionnaire of 43 items. The parent questionnaire includes questions such as rating how true the following statement is 'Easily provoked and reacts by losing his temper.' These questions will help me to answer how your child manages his feelings. The child questions include 'How often in your daily life do you feel mad at somebody?' Should you wish to participate in the study but would prefer to do so on a different day, we will arrange a time more convenient to you and provide transport costs to do so. Alternatively, you may choose to complete the interview during a follow up session to the clinic, for example before or after receiving assessment feedback, or before or after completing the psychological or psychiatric assessment. Approximately 100 parent-child couples will be interviewed from sites in the greater Johannesburg region. Participation is voluntary, and no person will be advantaged or disadvantaged in any way for choosing to participate or not participate in the study. You may refuse to answer any questions you would prefer not to, and you may choose to withdraw from the study at any point.

All of your responses will be kept confidential. Although direct quotes might be used, no information that could identify you would be included in the research report. Access to the questionnaires will be restricted to me, Lexi and Megan although only I will have access to all the information. I also ask for permission to access your hospital records. For the duration of the study, all questionnaires will be stored safely in a location with restricted access. These records will be kept for two years after the research has been examined should publications arise or six years if no publications arise, and then destroyed. Where publications arise, group results and not your individual results will be reported.

The results of the research will be reported in the research report, and may also be published in journal articles. After completion of the project the clinic will receive a summarised copy of the research report which they can make available to you. Alternatively you can contact me to discuss the findings.

Unfortunately children who have sustained a brain injury or who have been diagnosed with aspergers or autism are excluded from this study as it introduces a unique set of circumstances that needs to be investigated separately.

If you agree to participate and provide permission for your child to participate in the research, you will be asked to sign the attached consent form and your child the assent form. This research has been granted ethic clearance by the Medical and the Human Research Ethics Committee of the University of the Witwatersrand (clearance number: M10561). If you experience any problems with the research or would like to report any complaints, you can do so by contacting Ms Anisa Keshav on 011 717 1234.

My research supervisor is Prof Carol Long, a lecturer at the Department of Psychology, University of the Witwatersrand. Her contact telephone number is (011) 717-4510 and her e-mail address carol.long@wits.ac.za.

Your participation in this study would be greatly appreciated.

Yours faithfully,

Renate Gericke

T: 011 717 4555

Email: renate.gericke@wits.ac.za

L.2 Participant information sheet: Child version

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

Hi

My name is Renate Gericke, and I am doing research as part of a degree at the University of the Witwatersrand and I would like to invite you to participate in the research.

Research is a way to learn the answer to a question. My questions are what kinds of feelings do you have, what do you do with your feelings and how do you feel about people in your life. This will help me to understand what goes on inside of you better. I will do this by asking a few questions and inviting you to tell me some stories. I will ask you about your relationship with your mom and dad or whomever looks after you the most, what feelings you have had in the past week and what feelings you have the most strongly, for example, 'How often in your daily life do you feel mad at somebody?' In knowing the answers to these questions we will be in a position to better help children with their feelings.

If you agree to answer the questions, Megan, Lexi or I will sit with you. It will take about 40 minutes to complete while your mom or caregiver is being interviewed by the clinic staff. I also ask to look at your hospital records. If you would like to participate in the study but would prefer to do so on a different day, you can do so. Participating in the study is up to you, and you will not get into any trouble if you choose not to. You may refuse to answer any questions you don't want to, and you may choose to pull out of the study at any time.

Even though Megan, Lexi or I will know who you are, no-one else will know what your answers are. The hospital clinic may ask me how you did overall in order to help you better with the things you are struggling with but they won't tell anyone else.

If you agree to participate in the research, please sign the attached assent form.

Thank-you,

Renate Gericke

T: 011 717 4555

Email: renate.gericke@wits.ac.za

L.3 Interview consent form

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

I, _____, consent to be interviewed by Renate Gericke, Lexi Plitt or Megan Robinson for their investigation of feelings and relationships in relation to attachment security, and understand that:

- the nature and purpose of this study;
- that Renate will access my child's hospital records;
- that participation in this interview is voluntary;
- that I may refuse to answer any questions I would prefer not to;
- that I may withdraw from the study at any time;
- that no negative consequences will arise if I decide to withdraw or if I decline participation;
- that no identifying information will be included in the research report, my responses will remain confidential;
- that direct quotes may be used in the published work based on this research; however, no identifying information will be used so as to protect my identity;
- that there are no direct benefits to participating in this study;
- that there are no known risks associated with this study.

I confirm that I satisfy the research inclusion criteria, as specified in the participant information sheet.

Signed: _____

Date: _____

L.4 Interview assent form

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

I, _____, assent to be interviewed by Renate Gericke, Lexi Plitt or Megan Robinson for their investigation of feelings and relationships in relation to how secure I feel in the world, and I understand:

- what this research is about;
- that Renate will read my hospital file;
- that participation in this interview is voluntary;
- that I may refuse to answer any questions I would prefer not to;
- that I may withdraw from the study at any time;
- that there will be no negative consequences if I decide later that I don't want to take part;
- that my name or any information that could identify me won't be used in the research;
- where quotes are used no-one will be able to tell that they are my words;
- that there are no direct benefits to participating in this study;
- that there are no known risks associated with this study.

Signed: _____

Date: _____

Appendix M: Children's Homes

M.1 Participant information sheet: Child version

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

Hi.

My name is Renate Gericke, and I am doing research as part of a degree at the University of the Witwatersrand and I would like to invite you to participate in the research.

Research is a way to learn the answer to a question. My questions are what kinds of feelings do you have, what do you do with your feelings and how do you feel about people in your life. This will help me to understand what goes on inside of you better. I will do this by asking a few questions and inviting you to tell me some stories. I will ask you about your relationship with your mom and dad or whomever looks after you the most, what feelings you have had in the past week and what feelings you have the most strongly, for example, 'How often in your daily life do you feel mad at somebody?' In knowing the answers to these questions we will be in a position to better help children with their feelings.

If you agree to answer the questions, Lexi, Megan or I will sit with you. It will take about 60 minutes to complete. If you would like to participate in the study but would prefer to do so on a different day, you can do so. Participating in the study is up to you, and you will not get into any trouble if you choose not to. You may refuse to answer any questions you don't want to, and you may choose to pull out of the study at any time.

Even though Lexi, Megan or I will know who you are, no-one else will know what your answers are. The hospital clinic may ask me how you did overall in order to help you better with the things you are struggling with but they won't tell anyone else.

If you agree to participate in the research, please sign the attached assent form.

Thank-you,

Renate Gericke

T: 011 717 4555

Email: renate.gericke@wits.ac.za

M.2 Interview assent form

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

I, _____, assent to be interviewed by Renate Gericke, Lexi Plitt or Megan Robinson for their investigation of feelings and relationships in relation to how secure I feel in the world, and I understand:

- what this research is about;
- that participation in this interview is voluntary;
- that I may refuse to answer any questions I would prefer not to;
- that I may withdraw from the study at any time;
- that there will be no negative consequences if I decide later that I don't want to take part;
- that my name or any information that could identify me won't be used in the research;
- where quotes are used no-one will be able to tell that they are my words;
- that there are no direct benefits to participating in this study;
- that there are no known risks associated with this study.

Signed: _____

Date: _____

Appendix N: School

N.1 Participant information sheet : Parent version

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

Dear Parent or Legal Guardian

My name is Renate Gericke, and I am doing research for the purposes of obtaining a Doctorate degree at the University of the Witwatersrand. I would like invite you to participate in the study.

I am interested in understanding the way children aged between 8 and 12 feel about themselves and others better by looking at a number of variables. The variables I am looking at include his or her relationship with you, the number of different feelings s/he tends to have, how intense s/he feels things, how your child manages his or her feelings and how s/he views important people in his or her world. This will help me to answer how different children manage their anxieties and conflicts, and how different children anticipate others will respond to them. Better understanding of how children feel inside will aid psychologists in helping children.

Participation in this research will entail your child being interviewed by me or a student under my supervision, namely Lexi Plitt or Megan Robinson. The parent questionnaire consists of 26 items and the child interview 56 items. The child interview will last about 60 minutes during which time I will administer the following tests, the Attachment Story Completion Test, Thematic Apperception Test, Similarities subtest and Differential Emotions Scale. The child questions include 'How often in your daily life do you feel mad at somebody?' The parent questionnaire includes questions such as rating how true the following statement is 'Easily provoked and reacts by losing his temper.' These questions will help me to answer how your child manages his feelings. A summary of the research findings will be sent to all participating schools.

The findings of the Similarities subtest can be made available to you as well as recommendations for intervention where indicated. If you choose, you can contact me to discuss the findings.

Approximately 100 parent-child couples will be interviewed from sites in the greater Johannesburg region. Participation is voluntary, and no person will be advantaged or disadvantaged in any way for choosing to participate or not participate in the study. You may refuse to answer any questions you would prefer not to, and you may choose to withdraw from the study at any point.

All of your responses will be kept confidential. Although direct quotes might be used, no information that could identify you would be included in the research report. Access to the questionnaires will be restricted to me, Lexi and Megan although only I will have access to all the information. For the duration of the study, all questionnaires will be stored safely in a location with restricted access. These records will be kept for two years after the research has been examined should publications arise or six years if no publications arise, and then destroyed. Where publications arise, group results and not your individual results will be reported.

The results of the research will be reported in the research report and may also be published in journal articles.

Your participation in this study would be greatly appreciated. If you agree to participate, please sign the attached consent form and complete the attached Comprehensive Assessment of Defense Style questionnaire. Please also ask your child to sign the assent form and return these forms to your child's school. Returning the attached documents will be taken as permission to administer the tests to your child. Testing can be done during aftercare for those children attending aftercare or Lexi, Megan or I will be available for testing on Mondays to Fridays between 1:15 and 4pm in a venue to be announced.

Unfortunately children who have sustained a brain injury or who have been diagnosed with aspergers are excluded from this study as it introduces a unique set of circumstances that needs to be investigated separately.

This research has been granted ethic clearance by the Medical and the Human Research Ethics Committee of the University of the Witwatersrand (clearance number: M10561). If you experience any problems with the research or would like to report any complaints, you can do so by contacting Ms Anisa Keshav on 011 717 1234.

My research supervisor is Prof Carol Long, a lecturer at the Department of Psychology, University of the Witwatersrand. Her contact telephone number is (011) 717-4510 and her e-mail address carol.long@wits.ac.za.

Yours faithfully,

Renate Gericke

T: 011 717 4555

Email: renate.gericke@wits.ac.za

N.2 Participant information sheet: Child version

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

Hi.

My name is Renate Gericke, and I am doing research as part of a degree at the University of the Witwatersrand and I would like to invite you to participate in the research.

Research is a way to learn the answer to a question. My questions are what kinds of feelings do you have, what do you do with your feelings and how do you feel about people in your life. This will help me to understand what goes on inside of you better. I will do this by asking a few questions and inviting you to tell me some stories. I will ask you about your relationship with your mom and dad or whomever looks after you the most, what feelings you have had in the past week and what feelings you have the most strongly, for example, 'How often in your daily life do you feel mad at somebody?' In knowing the answers to these questions we will be in a position to better help children with their feelings.

If you agree to answer the questions, Lexi, Megan or I will sit with you. It will take about 60 minutes to complete. Participating in the study is up to you, and you will not get into any trouble if you choose not to. You may refuse to answer any questions you don't want to, and you may choose to pull out of the study at any time.

Even though Lexi, Megan or I will know who you are, no-one else will know what your answers are.

If you agree to participate in the research, please sign the attached assent form.

Thank-you,

Renate Gericke

T: 011 717 4555

Email: renate.gericke@wits.ac.za

N.3 Interview consent form

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

I, _____, consent to be interviewed by Renate Gericke, Lexi Plitt or Megan Robinson for their investigation of feelings and relationships in relation to attachment security experienced by children, and I understand:

- the nature and purpose of this study;
- that participation in this interview is voluntary;
- that I may refuse to answer any questions I would prefer not to;
- that I may withdraw from the study at any time;
- that no negative consequences will arise if I decide to withdraw or if I decline participation;
- that no identifying information will be included in the research report, and my responses will remain confidential;
- that direct quotes may be used in the published work based on this research; however, no identifying information will be used so as to protect my identity;
- that there are no direct benefits to participating in this study;
- that there are no known risks associated with this study.

I confirm that I satisfy the research inclusion criteria, as specified in the participant information sheet.

Signed: _____

Date: _____

N.4 Interview assent form

School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Tel: (011) 350-2632

I, _____, assent to be interviewed by Renate Gericke, Lexi Plitt or Megan Robinson for their investigation of feelings and relationships in relation to how secure I feel in the world, and I understand:

- what this research is about;
- that participation in this interview is voluntary;
- that I may refuse to answer any questions I would prefer not to;
- that I may withdraw from the study at any time;
- that there will be no negative consequences if I decide later that I don't want to take part;
- that my name or any information that could identify me won't be used in the research;
- where quotes are used no-one will be able to tell that they are my words;
- that there are no direct benefits to participating in this study;
- that there are no known risks associated with this study.

Signed: _____

Date: _____

Appendix O

Demographics questionnaire for psychology and psychiatry clinic

CHILD DEMOGRAPHICS

HOSPITAL CODE: _____

SITE (for administrative purposes)**:** _____

NAME (for administrative purposes)**:** _____

DATE: _____

DATA CAPTURER: _____

DATE OF BIRTH: _____

AGE (incl. months): _____ **GRADE:** _____

GENDER: _____

HOME LANGUAGE/S: _____

LANGUAGE OF EDUCATION (and for how long): _____

LANGUAGE TESTED IN: _____

HOW LONG HAS THE CHILD SPOKEN ENGLISH OR AFRIKAANS FOR: _____

WHO COMPLETED THE CADS? _____

RACE: _____

Who does your child live with (e.g. mother, father, grandmother or adoptive parents) and for how long has s/he lived with you? This question relates to your child's primary caregivers and not to siblings. _____

_____

_____

_____

_____

Who else has this child lived with and for how long (e.g. grandmother from age 0 to 3 years)? Please list chronologically. _____

_____

_____

_____

_____

Has your child been diagnosed with autism or aspergers syndrome? _____

Has your child suffered a head injury? _____

THANK-YOU FOR YOUR TIME

Demographics questionnaire for children's homes

CHILD DEMOGRAPHICS

HOME CODE: _____

SITE (for administrative purposes)**:** _____

NAME (for administrative purposes)**:** _____

DATE: _____

DATA CAPTURER: _____

DATE OF BIRTH: _____

AGE (incl. months): _____ **GRADE:** _____

GENDER: _____

HOME LANGUAGE/S: _____

LANGUAGE OF EDUCATION (and for how long): _____

LANGUAGE TESTED IN: _____

HOW LONG HAS THE CHILD SPOKEN ENGLISH OR AFRIKAANS FOR: _____

WHO COMPLETED THE CADS (e.g. house mother)? _____

RACE: _____

Who does your child live with (e.g. mother, father, grandmother or adoptive parents) and for how long has s/he lived with you? This question relates to the child's primary caregivers and not to siblings._____

_____

_____

_____

_____

Who else has this child lived with and for how long (e.g. grandmother from age 0 to 3 years)? Please list chronologically. _____

_____

_____

_____

_____

Has the child been diagnosed with autism or aspergers syndrome? _____

Has the child suffered a head injury? _____

THANK-YOU FOR YOUR TIME

Demographics questionnaire for the inner-city school

CHILD DEMOGRAPHICS

SCHOOL CODE: _____

SITE (for administrative purposes)**:** _____

NAME (for administrative purposes)**:** _____

DATE: _____

DATA CAPTURER: _____

DATE OF BIRTH: _____

AGE (incl. months): _____ **GRADE:** _____

GENDER: _____

HOME LANGUAGE/S: _____

LANGUAGE OF EDUCATION (and for how long): _____

LANGUAGE TESTED IN: _____

HOW LONG HAS THE CHILD SPOKEN ENGLISH OR AFRIKAANS FOR: _____

WHO COMPLETED THE CADS? _____

RACE: _____

Who does your child live with (e.g. mother, father, grandmother or adoptive parents) and for how long has s/he lived with you? This question relates to your child's primary caregivers and not to siblings. _____

_____

_____

_____

_____

Who else has this child lived with and for how long (e.g. grandmother from age 0 to 3 years)? Please list chronologically. _____

_____

_____

_____

_____

Has your child been diagnosed with autism or aspergers syndrome? _____

Has your child suffered a head injury? _____

THANK-YOU FOR YOUR TIME