

**THE MODERATING ROLE OF FAMILY STRUCTURE ON THE ASSOCIATION  
BETWEEN ATTACHMENT FUNCTIONING AND EMOTION REGULATION AMONG  
VULNERABLE CHILDREN IN SOUTH AFRICA**

by

**JACKIE JANSEN VAN VUUREN**

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**SUPERVISOR:** Mr. J.K. Mashaba

**CO-SUPERVISOR:** Prof. S. Mashegoane

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## Declaration

I, Jackie Jansen van Vuuren, declare that this mini-dissertation hereby submitted to the University of Limpopo for the degree of Master of Arts in Clinical Psychology is my original work and has not been submitted elsewhere for examination or publication. I confirm that all sources used in this research have been properly cited and referenced, and this mini-dissertation contains no plagiarised material. I understand that plagiarism and academic dishonesty are serious offences, and I declare that I have conducted my research with integrity and honesty.



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Signature

27/02/2025

.....  
Date

## **Dedication**

For the love of learning and the pursuit of excellence, this dissertation is dedicated to the countless individuals who have contributed to the advancement of knowledge. Your efforts and discoveries have paved the way for future generations, and it is in your honour that this work is presented.

## **Acknowledgments**

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## Abstract

This study explores the moderating role of family structure on the relationship between attachment functioning and emotion regulation among vulnerable children in South Africa. The research employs a quantitative, cross-sectional design, utilizing a sample of 33 children aged 7-12 from the Hlatlaganya Drop-In-Centre. The Kinetic Family Drawing (KFD) and the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) were administered to assess attachment functioning and emotion regulation strategies, respectively. Crosstabulation and 2-Way ANOVA were employed to examine associations and interaction effects among attachment functioning, emotion regulation strategies, and family structure. The results indicate a significant association between attachment security and the use of cognitive reappraisal as an emotion regulation strategy. Furthermore, family structure was found to moderate this relationship, with the impact of attachment security on cognitive reappraisal being more pronounced in single-parent households compared to two-parent households. No significant effects were observed for expressive suppression. These findings underscore the importance of considering family structure in interventions aimed at enhancing emotion regulation in children, particularly those from single-parent households. The study highlights the need for culturally sensitive measures and further research to elucidate the complexities of attachment and emotion regulation within diverse family contexts in South Africa.

*Keywords:* attachment, emotion regulation, kinetic family drawing, family structure

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## List of Acronyms

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Acronym	Definition
KFD	Kinetic Family Drawing
KFD-R-IQ	Kinetic Family Drawing Revised Interview Questionnaire
SGD	Sustainable Goals of Development
ER	Emotion Regulation
ERQ-CA	Emotion Regulation Questionnaire for Children and Adolescents
CR	Cognitive Reappraisal
ES	Expressive Suppression

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## Chapter 1: Overview of the Study

### 1.1 Introduction

Existing literature highlights the interrelatedness of family structure, attachment functioning, and emotion regulation (Brandão et al., 2022; Davids et al., 2017; Kerns & Brumariu, 2014; Rawatlal et al., 2015). For example, there has been some affirming research illustrating that children from single-parent families may experience different attachment patterns and emotion regulation strategies compared to those from two-parent families (Rawatlal et al., 2015).

Several studies highlight the importance of family structures, specifically within the South African context (Casale, 2015; Wouters et al., 2016). As a country, South Africa is considered to possess both individualistic and collectivistic cultural practices (Eaton & Louw, 2000; Laher & Dockrat, 2019). This illustrates a significant difference in how South Africans belonging to different groups utilize interpersonal relationships and develop accordingly (Laher & Dockrat, 2019). While nuclear families were once considered to be the optimal family type, recent studies have challenged that heteronormative view, emphasizing the importance of considering the complex social dynamics related to the functioning of a family (Botha et al., 2018; Rabe & Naidoo, 2015).

Diversity in family functioning is further emphasized in the historical and cultural evolution of South African families (Seekings, 2008). Existing research supports this emphasis on diversity and stresses the importance of conceptualizing aspects such as family dynamics as applicable to the related cultural group (Rabe & Naidoo, 2015; Amoateng & Heaton, 2007; Sooryamoorthy & Makhoba, 2016; Laher & Cockcroft, 2017).

Previous studies done in the South African context focused on how a child's family network facilitates resilience as a byproduct of a nurturing environment, featuring family structure as related to attachment and emotion regulation

(Dorison et al., 2022; Tomlinson et al., 2021; Wang et al., 2021). These studies on resilience were done concerning challenges faced during the COVID-19 pandemic and brought light to the importance of South African children having access to family members (Dorison et al., 2022; Tomlinson et al., 2021; Wang et al., 2021).

Morris et al. (2007) highlighted the importance of more research focusing on the family system as a whole to fully understand how the family, not just the parents, impacts the emotion regulation of children. According to Sutton (2019), attachment is commonly associated with a range of familial experiences, such as parenting challenges, structural changes in the family, family conflict, marital satisfaction, conflict-resolution abilities, and even intimate partner violence.

Attachment theory is centred around the bonds formed between caregivers and children, and the psychological significance thereof, illustrating the relevance of the theory in the investigation of the impact of family structures in the South African context (Shiller, 2017). Ainsworth piloted research in Uganda that formed a foundational conceptualization of attachment theory that remains relevant to this day (Cassidy et al., 2013; Voges et al., 2019). Her research and other studies done in Africa are often used to support the use of attachment theory in the African context (Voges et al., 2019). While the theoretical framework is held in high regard by modern-day psychologists, there remains significant potential for applying this framework to research in South Africa (Shiller, 2017; Voges et al., 2019).

When considering the cultural diversity in South Africa, it is important to note the significant role that culture plays in the variations observed in the expression of attachment behaviours (Rabe & Naidoo, 2015; Voges et al., 2019). While attachment styles are connected to a multitude of aspects of life, the principal purpose thereof has been to enhance survival (Ein-Dor & Hirschberger, 2016). Bowlby (1988), in his conceptualisation of attachment theory, emphasized proximity-seeking behaviour as a biologically driven mechanism aimed at ensuring protection and survival. This foundational perspective underpins the understanding of attachment as both adaptive and shaped by contextual

factors. Accordingly, the survival function of attachment situates its expression within the context or environment in which the individual develops.

## **1.2 Statement of the Problem**

Although some research has shown a link between attachment functioning and emotion regulation, the mechanism and pathways within which they relate and develop remain unclear (Bosmans et al., 2020; Kobak, & Bosmans, 2019; Pascuzzo et al., 2015; Waters et al., 2010). One of the factors that is inseparable from the association between attachment and emotion regulation is the family environment (i.e., parental support and presence) (Meyer et al., 2014). This is especially due to the family environment's role in child functioning and development (Meyer et al., 2014).

Despite the influence family structure has on a child's attachment dynamics and emotion regulation, there is little research exploring this in the South African context (Cooke et al., 2019; Demby et al., 2017; Leerkes & Bailes, 2019). There is a lack of research on how different family structures (i.e., the presence or absence of one or two parents) could reflect in the attachment functioning and emotion regulation of children from South African samples (Cooke et al., 2019; Theron et al., 2015; Tomlinson et al., 2005). This is a significant gap in the literature particularly because of the relevance of family structure to both attachment functioning and emotion regulation, especially in the (South) African context. The study aims to add to the existing body of research on attachment and emotion regulation by addressing the methodological limitations, relating to culturally appropriate measurement, of extant studies. Culturally appropriate measurement refers to the use of assessment tools that minimize the influence of cultural background and linguistic proficiency. This was undertaken by utilizing a projective measure to examine attachment functioning and employing a pilot study to improve the quality and efficacy of the main study.

### **1.3 Aim of the Study**

To examine the role of family structure as a moderating factor in the relationship between attachment functioning and emotion regulation of vulnerable children in South Africa.

### **1.4 Objectives of the Study**

The objectives of the study were:

1.4.1 To examine whether there is a statistically significant association between attachment functioning and emotion regulation in vulnerable children; and

1.4.2 To investigate the moderating role of family structure (between single and two-parent households) on the relationship between attachment functioning and emotion regulation in vulnerable children.

### **1.5 Research Questions**

The research questions of the study were:

1.5.1 Is there a statistically significant association between attachment functioning and emotion regulation in vulnerable children?

1.5.2 Does family structure moderate the association between attachment functioning and emotion regulation in vulnerable children?

### **1.6 Hypotheses**

The following hypotheses were proposed:

1.6.1 Null Hypothesis ( $H_0$ ): There will be no significant relationship between attachment functioning and emotion regulation in vulnerable children.

1.6.2 Null Hypothesis ( $H_0$ ): Family structure will not moderate the relationship between attachment functioning and emotion regulation in vulnerable children.

1.6.3 Alternative Hypothesis 1 ( $H_1$ ): There will be a significant association between attachment functioning and emotion regulation in vulnerable children.

1.6.4 Alternative Hypothesis 2 ( $H_2$ ): Family structure will moderate the association between attachment functioning and emotion regulation in vulnerable children.

## **1.7 Significance of the Study**

Given the significance of family structure concerning attachment functioning and emotion regulation and recognizing the scarcity of research on the potential moderating role that family structure might play in mediating these connections, identifying such an association could provide not only practical value but also methodological, scientific, and clinical insights. The investigation assumes particular importance in light of the parenting challenges encountered in South Africa, contributing not just to our understanding of the dynamics within these families but also offering methodological advancements, scientific knowledge, and potential clinical implications for enhancing mental health support in such contexts. Such contributions could inform professionals in their interventions, promoting the mental health outcomes of children, which effectively aligns with the core intent of Sustainable Development Goals (SDGs) which is to promote a more sustainable future (Liebenberg & Scherman, 2021).

## **1.8 Operational Definitions and Terms**

The following terms are used in the study:

### **1.8.1 Attachment**

An emotional bond is characterised by the inclination to seek out and maintain proximity to a specific attachment figure (Bowlby, 1988; Gagliardi, 2022).

Attachment (as related to proximity-seeking) can also be defined as a motivational system or an adaptation mechanism essential to survival (Ali et al., 2021; Gagliardi, 2022).

### **1.8.2 Attachment Style**

This concept refers to the organized presentation or pattern of attachment behaviours as related to expectations, needs, emotions, and social behaviour (Blakely & Dziadosz, 2015).

### **1.8.3 Attachment Functioning**

Attachment functioning broadly encompasses the ways in which the child's behaviour is organised from an attachment perspective (Groh et al., 2017). This study uses attachment security as a representation of attachment functioning, differentiating between secure and insecure attachment functioning (Groh et al., 2017).

### **1.8.4 Internal working models (IWMs)**

Internal working models are mechanisms through which children internalize their interactions with caregivers, forming internal mental representations that develop in early close relationships between the self, attachment figure(s), and the environment (Senior, 2013).

### **1.8.5 Secure base**

An attachment figure that allows a child to express an innate instinct to explore their environment in order to grow progressively, independent of the attachment figure (Costello, 2013).

### **1.8.6 Emotion regulation**

The processes by which we influence which emotions we have, when we have them, and how we experience and express them (Gross, 2002; Paley & Hajal, 2022; Tang et al., 2019). In this study, emotion regulation is represented by emotion regulation strategies, identified by Gross (2002): cognitive reappraisal and expressive suppression.

### **1.8.7 Family**

A group of persons related through marriage, blood, or adoption, who live together in a single household (Sharma, 2013).

### **1.8.8 Family structure**

As related to the operational definition of family, family structure can be conceptualized in various ways (Brown et al., 2015). For this study, family structure also represented as household type, represents the family members present in the child's household (Brown et al., 2015).

### **1.8.9 Single-parent household**

A household consisting of a parent or caregiver and one or more dependent children, lacking the presence and assistance of a spouse or adult partner sharing parenting responsibilities (Lindwall et al., 2011).

### **1.8.10 Nuclear (two-parent) household**

A household consisting of two parents or caregivers who jointly bear the responsibility of supporting and nurturing one or more dependent children (Williams, 2011).

### **1.8.11 Moderation**

In the context of this study, moderation refers to the extent to which the strength and direction of the relationship between the independent (attachment functioning) and dependent variable (emotion regulation) are influenced by a third variable (household type) (Hayes & Little, 2018; Zeigler-Hill & Shackelford, 2020).

## **1.9 Outline of the Mini-dissertation Chapters**

Here follows an overview of the structure and content of each chapter:

**Chapter 1:** This chapter provides a general introduction to the study. It encompasses the background of the research, the research problem, objectives, operational definitions of terms used in the study, and the study's significance. Additionally, the chapter incorporated hypotheses, which were subsequently tested through the research findings.

**Chapter 2:** In this chapter, attention is directed towards the theoretical framework that is relevant for understanding the study. It offers a comprehensive description and explanation of the key theories utilized to study the association between the variables of the study. It additionally, presents pertinent information derived from a review of comparable studies conducted by other researchers. Emphasis will be placed on the outcomes obtained in these earlier studies. The literature review serves as a fundamental basis for the present study.

**Chapter 3:** This chapter provides a description of the methodology employed in the current study. It includes an explanation of the research design, the chosen population sample, the sampling techniques utilized, the application of data collection tools, the data analysis process, and the ethical considerations addressed during the study's execution.

**Chapter 4:** This chapter presents the study's findings. The results will be communicated using graphs and tables to facilitate the interpretation of the outcomes.

**Chapter 5:** The concluding chapter discusses the research findings by comparing and relating them to extant literature. This involves incorporating the previously introduced theoretical framework, examining and discussing the hypotheses, deliberating on the drawn conclusions, and providing recommendations based on the research results. Additionally, the chapter addresses the study's limitations.

## **Chapter 2: Theoretical Perspective and Literature Review**

### **2.1 Introduction**

This research project draws on attachment theory to explain the association between the study variables. John Bowlby and Mary Ainsworth have made major contributions to the development of attachment theory (Ainsworth, 1969, 1970; Ainsworth et al., 1978; Ainsworth & Bowlby, 1989; Bowlby, 1951, 1969, 1973, 1980, 1988; Bowlby & Ainsworth, 1965). Attachment theory is elaborated on, illustrating its role in contemporary therapeutic practice and research. Attachment theory illustrates how attachment bonds are formed and how they contribute to the psychological development of individuals, relating to concepts such as emotion regulation, communication, and behaviour. In effect, the attachment theory framework is used to inform the design and interpretation of this study. A contextual background to this study is presented through the review of studies, presenting evidence relevant to this one. At the outset of the review, the significance of a child's family environment is highlighted, followed by an exploration of studies focusing on attachment as related to emotion regulation. The significance of emotion dysregulation is explored, illustrating possible consequences thereof, leading to a holistic conclusion of relevant aspects.

### **2.2 Theoretical Paradigm: Attachment Theory**

#### **2.2.1 *Bowlby's Attachment Theory***

Attachment theory originated out of the field of psychoanalysis (Shiller, 2017). John Bowlby, a psychoanalyst, introduced attachment theory following his research on human development and the influence of attachment, separation, and loss (Thompson et al., 2021). While Bowlby's views were considered controversial at the time, attachment theory is currently held in high regard (Duschinsky, 2020). According to Shiller (2017), attachment theory plays a critical role in providing the empirical support required for psychoanalysis to

stay credible in its use relating to research and treatment in the field of psychology (Shiller, 2017). The credibility of attachment theory is supported by research conducted by professionals who have found ways to empirically test Bowlby's theories (Duschinsky, 2020; Fraley, 2019; Thompson et al., 2021; Verhage et al., 2018).

Attachment theory, as proposed by Bowlby, suggests that early relationships with caregivers play a crucial role in shaping an individual's socio-emotional development (Bowlby, 1988; Shiller, 2017). This theory posits that the quality of attachment relationships has a significant impact on various aspects of development, including emotion regulation, social cognition, and behaviour (Bowlby, 1988). This puts into perspective, the notion that attachment relationships are linked to emotion regulation and how the presence of different attachment figures might influence attachment security.

Bowlby's views have been criticized for being monotropic in how he focused on one primary attachment figure in his conceptualization of a child's development (Voges et al., 2019). This is an important limitation to consider when using Bowlby's attachment concepts, while at the same time also highlighting the importance of investigating the influence of other caregivers (Voges et al., 2019).

Bowlby proposed that the capacity of attachment relationships to serve as a secure base hinges on the way their patterns of interactions manifest as a representation of relationships, which he termed *internal working models* (Bowlby, 1988). Internal working models are mechanisms through which children internalize their interactions with caregivers, forming internal mental representations that develop in early close relationships between the self, attachment figure(s), and the environment (Senior, 2013). These interactions between children and caregivers relate to communication and the child's capacity to discuss internal emotional states (Bretherton, 1992; Costello, 2013). This capacity for open communication surrounding affective states is interconnected to the development and internalization of the capacity for adaptive action, and processes of emotion regulation (Costello, 2013). The

significance of early parent-child interactions lies in how internalization of these interactions relates to the development of internal working models, and the ability to emotionally regulate (Fraley, 2019). In contexts marked by parenting challenges – such as emotional unavailability, inconsistent caregiving, or chronic stress – children may struggle to develop this communicative capacity. These disruptions can hinder the internalization of adaptive emotion regulation strategies and compromise the formation of secure attachment bonds. This supports the appropriateness of this study's conceptualization and measurement of emotion and the emphasis on parental involvement (Ferschmann et al., 2021). Communication as related to emotion regulation is ingrained in cognitive reappraisal and expressive suppression which are further elaborated on in 2.3.4.

In light of the importance of parent-child interactions, Senior (2013) states that children who experience sensitive and emotionally available caregiving develop positive internal working models (other- and self- model) in how they develop a sense of others being dependably available and supportive and themselves being competent and worthy of attention and affections. These children typically have positive expectations of intimate relationships and have a positive developmental prognosis (Kochanska & An, 2024; Senior, 2013). Such expectations align with a *secure base script* which is a mental representation of how parent-child interactions with a caregiver are expected to transpire (Bretherton & Munhollan, 2015; Vreeswijk et al., 2012). Adversely, it is suggested that when caregiving is inadequate, the development of the child's internal working models is compromised (Bernier et al., 2015; Groh et al., 2017). The child will then develop deficits in their sense of self and others, usually correlating with their parent-child experiences (or lack thereof), often presenting with negative expectations within relationships (Fearon et al., 2010; Kochanska & An, 2024).

In essence, the above speaks to the availability of a secure base, which when available would lead to the development of secure attachment between a child and caregiver (Costello, 2013). When a secure base is not available to the child, due to inconsistent support or emotional unavailability from parents,

maladaptive internal working models develop (Costello, 2013; Senior, 2013). Bowlby (1988) posits that once formed in early childhood, internal working models persist and serve as templates for subsequent close relationships. Furthermore, internal working models are relationship-specific, shaped through day-to-day interactions with caregivers, and are reinforced within the self, concerning the attachment figure (Bowlby, 1988). Therefore, it can be said that the development of internal working models is an ongoing process, and while resistant to change, is not set in stone.

Considering the long-term impact that internal working models and secure attachment can have on a child's developmental prognosis, attachment theorists place emphasis on how changes in a child's attachment context can enhance the development of secure attachment bonds and internal working models.

### **2.2.2 *Ainsworth's Contribution to Attachment Theory***

Mary Ainsworth's research led to the development of reliable ways of assessing attachment security in infants and young children (Shiller, 2017). Without Ainsworth's ground-breaking contribution to attachment theory, Bowlby's theories may have remained unproven and irrelevant (Bretherton, 2013; Shiller, 2017).

Ainsworth theory proposed that behavioural patterns of care-seeking are based on how a caregiver responds to the child (Senior, 2013; Voges et al., 2019). From an early age, the child acquires an understanding of which behaviours will result in receiving care from the primary caregiver and which behaviours will not (Mikulincer & Shaver, 2016; Senior, 2013). Ainsworth made an effort to empirically examine whether the quality of maternal responsiveness is directly linked with the behavioural patterns of her infant, focusing on comfort-seeking and contact maintenance behaviour (Bretherton, 2013; Senior, 2013; Shiller, 2017). While Ainsworth primarily examines the quality of maternal responsiveness, more recent studies affirm the importance of father-child

attachment, introducing a more complex perspective on attachment and the role of primary caregivers (Elhusseini et al., 2022; Shenaar-Golan et al., 2021).

Mary Ainsworth piloted a study on mother-infant interaction in Uganda (Voges et al., 2019). Inspired by Bowlby's work she utilized observational methods to examine mother-infant interaction and the application of Bowlby's theory in a cross-cultural setting (Voges et al., 2019). Ainsworth's work in Uganda serves as one of the first-cross cultural comparisons of infant behaviour (Voges et al., 2019).

Through her experiment, the *Strange Situation*, Ainsworth initially observed three attachment classifications, namely: secure, insecure-ambivalent/resistant, and insecure-avoidant (Duschinsky, 2020; Senior, 2013). Another attachment category – insecure-disorganized – was later identified by Main and Solomon and added to Ainsworth's original model (Main & Solomon, 1990; Shiller, 2017).

As previously suggested, attachment behavioural patterns could be linked to the caregivers' success or failure in responding to and meeting the infant's needs (Raby & Dozier, 2018; Senior, 2013; Shiller, 2017). Therefore, classifying a child's attachment behaviours could reflect how successful the child's caregiving environment was at meeting the child's needs. It is important to note that in recent theoretical developments, researchers have emphasized the significance of adopting a dimensional perspective rather than only viewing attachment from the classical categorical standpoint (Gagliardi, 2022).

### **2.2.3 Categorical Perspective and Attachment Styles**

As indicated above, Ainsworth's categorization of attachment initially included three categories, namely: 1) secure, 2) insecure-avoidant, and 3) insecure-ambivalent/resistant (Sadock & Sadock, 2007). Insecure-disorganized was later added by Main and Solomon as the fourth category (Main & Solomon, 1990). This categorization of attachment is also referred to as the categorical

perspective (Gagliardi, 2022). The categories consist of secure attachment and insecure attachment as indicated in the names. Secure attachment develops when a child confidently anticipates the availability and responsiveness of the attachment figure when needed (Voges et al., 2019). Security can be viewed as the absence of avoidance and ambivalence (Gagliardi, 2022). In contrast, children are expected to develop insecure attachments when they lack such confidence in their expectations (Cassidy, 2016). In essence, the categorical perspective assumes the existence of a security-insecurity dimension which corresponds to the sensitive responsiveness of the caregiver, in the absence of which avoidance and ambivalence (as related to the dimensional perspective) can be seen (Raby et al., 2021a).

Adaptive internal working models are normally associated with secure attachment, while maladaptive internal working models are associated with insecure attachment styles (Costello, 2013; Kobak & Bosmans, 2019). Maladaptive internal working models are thus associated with the manifestation of avoidance and ambivalence which are opposite strategies, but from the same dimension (insecure) (Gagliardi, 2022). Moreover, the secure or insecure nature of attachment is evident in personality traits, relational styles, and psychological functioning (such as self-perception, self-esteem, and reflective abilities) (Marrone, 2014). These aspects can be evaluated separately from attachment security but may serve as indirect indicators of it (Marrone, 2014).

**2.2.3.1 Secure Attachment Style.** Children with secure attachment typically feel assured that their caregivers will be present and responsive during challenging or distressing situations (Voges et al., 2019). Infants with secure attachment typically utilize their bond with caregivers as a secure base for exploring and interacting with their surroundings (Ali et al., 2021; Costello, 2013). Upon reunification with their caregivers, these infants tend to engage their caregivers in interactions, displaying warm and affectionate behaviour (Bakermans-Kranenburg et al., 2011). Securely attached children rarely exhibit negative affect, or avoidance towards their caregiver and when such behaviours do occur, they are typically brief (Quiroga et al., 2017). This type of

attachment relationship is considered optimal for the psychological development of the child (Cassidy, 2016).

**2.2.3.2 Avoidant Attachment Style.** In Ainsworth's *Strange Situation*, those infants who were avoidantly attachment presented with minimal anxiety when separated from their mothers, and repulsed when they returned (Cassidy, 2016; Voges et al., 2019). Children with avoidant attachment have often been exposed to rigid means of emotion regulation and their attempts to seek comfort from caregivers are often met with rejection (Ali et al., 2021; Cassidy, 2016). Because the expression of negative emotions or distress is ineffective in eliciting caring/comforting responses, these experiences are later considered threatening (Cassidy, 2016). Avoidantly attached children are reluctant to seek contact with their caregivers in response to experienced threat, essentially redirecting distress and suppressing desires for closeness (Cassidy, 2016).

This attachment style is organized in how the core tendency of these children is to defensively restrict certain emotions from awareness, causing a split between elements of thought and feeling (Cassidy, 2016). This results in the development of underlying negativism that was learnt to not be expressed, especially when negative affect could heighten conflict (Cassidy, 2016). These children are generally more susceptible to internalizing problems (Mashegoane & Ramoloto, 2016; Shiller, 2017). While secure attachment behaviour is considered healthy, it is often those children with avoidant attachment styles that become experts at conforming to cultural norms (Cassidy, 2016).

**2.2.3.3 Ambivalent/Anxious Attachment Style.** Infants with ambivalent attachment become extremely distressed when separated from caregivers, and when the caregiver returns, they exhibit intense affective states, ranging from being angry to being overly clingy (Voges et al., 2019). Evidence suggests that ambivalent children have mothers who did not provide consistent availability and comfort during distressing experiences (Cassidy, 2016; Marrone, 2014). The mothers of ambivalent children often discourage autonomy and independence, hindering exploration and the development of self-confidence (Marrone, 2014). These children do not feel like they can trust their caregivers

will be responsive when needed and they become preoccupied with the availability of their caregivers (Cassidy, 2016).

**2.2.3.4 Disorganized Attachment Style.** Disorganized attachment was discovered by Main and Solomon (1986). The distinction between disorganized attachment and other attachment categories is seen in how patterns are considered organized when there is some extent of consistency in how the child functions on emotional, behavioural, and physiological systems (Dubois-Comtois et al., 2015; Voges et al., 2019). Functioning in these domains relates to internal working models as related to prior caregiving experiences (Dubois-Comtois et al., 2015).

Marrone (2014, p. 71) conceptualized disorganized attachment as the “temporary collapse of a viable strategy”. It is the consequence of a child having to cope with the duality of his mother being both threatening and a requirement for support (Gagliardi, 2022; Marrone, 2014). This attachment style is characterized by how the child feels frightened alone and frightened by others (Ali et al., 2021). These children typically experience unescapable anxieties that are difficult to soothe due to the inability to establish a sense of security (Ali et al., 2021). Children with disorganized attachment patterns are considered to be at heightened risk of developing emotional and behavioural issues in comparison to children with insecure, but non-disorganized attachment (Gore et al., 2014; Marrone, 2014).

#### **2.2.4 Dimensional Perspective of Attachment**

The attachment between a child and their caregiver pertains to a multitude of factors that impact their relationship (Fraley & Roisman, 2016; Thompson et al., 2021). The classical categorical model of attachment focuses almost exclusively on attachment behaviour as organized in a system for controlling caregiver proximity (Gagliardi, 2022; Raby et al., 2021a). A dimensional perspective (DP) has been proposed to address the limitations of the classical categorical model (Gagliardi, 2022; Morales-Vives et al., 2021).

The dimensional perspective focuses on avoidance and ambivalence as related to the adequacy of care received (Blakely & Dziadosz, 2015). Attachment (and proximity-seeking behaviour) – as a motivational system – can be deactivated or hyperactivated in response to care being inadequate (Mikulincer & Shaver, 2016). This deactivation and hyperactivation encompass avoidance and ambivalence as understood from the dimensional perspective (Gagliardi, 2022).

The avoidance dimension is characterized by the child's deactivation of attachment (Blakely & Dziadosz, 2015). A child displaying high levels of avoidance thus shows low activation of attachment or low need to receive care, while showing high rates of exploration (Morales-Vives et al., 2021). Avoidance correlates with the presence of insensitivity in caregiving, where the caregiver's caregiving system is not activated in response to the child's need for caregiver sensitivity (emotional connectedness) (Gagliardi, 2021; Mikulincer & Shaver, 2016). This caregiver feature then results in the child's deactivation of their attachment system (Gagliardi, 2021). The avoidance dimension holds a likeness to the avoidant attachment style, the conceptualization thereof is to be used as a position on a spectrum, rather than a category (Raby et al., 2021a).

The ambivalence dimension is characterized by the child's hyperactivation of attachment (Blakely & Dziadosz, 2015; Gagliardi, 2021). A child displaying high levels of ambivalence thus shows high activation of attachment or high need to receive care, while showing lower rates of exploration (Gagliardi, 2021). While avoidance correlates with caregiver insensitivity, ambivalence correlates with unresponsiveness (Mikulincer & Shaver, 2016). Unresponsiveness refers to the physical availability/attendance of the caregiver when the child's attachment system is activated (Mikulincer & Shaver, 2016). Unresponsiveness by a parent leads to the hyperactivation of the child's attachment system (Mikulincer & Shaver, 2016). For example, a parent who is often distracted by other matters and is physically non-attendant might have a child who becomes increasingly persistent in reminding the parent to be available, thus displaying an increase in proximity-seeking behaviours (Gagliardi, 2021; Morales-Vives et al., 2021).

The ambivalence dimension is similar to the ambivalent/anxious attachment style, but as discussed previously is conceptualized as dimensional rather than categorical.

While the categorical perspective remains a core theoretical element of this study, the dimensional perspective is significant in providing a thorough conceptualization of attachment theory. The dimensional perspective is also noteworthy with consideration of the relationship between attachment and emotion regulation.

### **2.2.5 *Mentalization as an Attachment Concept***

Mentalization is an important concept to consider when using attachment theory as a conceptual framework. Mentalization encompasses the individual's ability to interpret his own and others' behaviour as related to mental states (Bateman & Fonagy, 2016; Fonagy & Luyten, 2009). The concept of Mentalization first appeared in psychoanalytic literature in the late 1960s. Later on, Heinz Wimmer and Josef Perner further developed this concept in the early 1980s (Fonagy & Allison, 2012). Ultimately, in the 1990s, Peter Fonagy and Anthony Bateman expanded on the concept of Mentalization and placed it in the context of developmental psychopathology and attachment theory (Fonagy & Allison, 2012).

Individuals with attachment disruptions often have difficulties in mentalizing, which is then related to the preservation of maladaptive internal working models, the formation of relationships that are unstable or lack a sense of deep connection, and very importantly, the ability to regulate intense affective states (Bateman & Fonagy, 2016; Fonagy & Luyten, 2009). The process of mentalization is inherently linked to verbal and non-verbal communication between caregivers and children and becomes an essential part of how children approach emotion regulation in their day-to-day lives (Schwarzer et al., 2021).

### **2.2.6 Challenges in Measuring Attachment**

Aligning with the categorical and dimensional perspectives on attachment, attachment-related measures can also be broadly categorized as categorical and dimensional (Raby et al., 2021a). Both these perspectives have their place in research and intervention planning, and accordingly the measurement thereof can be instrumental (Raby et al., 2021a).

These measures provide a structured manner in which researchers and practitioners can gain insight into how early attachment experiences influence subsequent development (Blake et al., 2024). These measures can also be used to help predict psychological outcomes related to emotion regulation, social competence, and overall mental health. For example, the AAI has been used to predict parenting behaviours and the intergenerational transmission of attachment dynamics (Main et al., 1985; Verhage et al., 2018). Attachment measures allow attachment-informed practitioners to tailor treatment planning to the individual's attachment style as well as their more idiographic attachment dynamics (Mikulincer & Shaver, 2016; Simpson & Belsky, 2021). Such measures can also serve to inform the therapeutic relationship, allowing the practitioner to better navigate the intersubjective aspects of their own and their patient's attachment functioning (Maunder & Hunter, 2016; Talia & Holmes, 2021).

The measurement of attachment involves several challenges. While Ainsworth's Strange Situation Procedure (SSP) is considered the gold standard for assessing attachment in infants, it is less applicable to older children and adults (Ainsworth et al., 1978; Bradley & Cafferty, 2001). Various attachment measures have been developed for use in different age and population groups, however, these measures often face issues of validity and reliability (Fairchild, 2006; Brennan et al., 1998). A significant challenge lies in the absence of a universal standard for measuring attachment across different developmental stages and cultural contexts (Keller, 2013; van IJzendoorn & Bakermans-Kranenburg, 2018).

Cultural consideration is crucial when applying attachment theory (Tomlinson et al., 2010). The measurement of attachment is complicated by how attachment functioning can present differently depending on cultural norms and caregiving practices (van IJzendoorn & Sagi-Schwartz, 2008). Furthermore, social desirability and the subjective interpretations of researchers also impact the reliability and validity of findings, given that several measures utilize self-report and observational methods (Caputo, 2017; Paulhus, 2002; Solomon & George, 1999).

In addition to the SSP, notable attachment measures include the Adult Attachment Interview (AAI), the Attachment Styles Questionnaire (ASQ), the Experiences in Close Relationships (ECR) Scale, the Primary Attachment Style Questionnaire (PASQ), and The Kinetic Family Drawing (KFD) (Brennan et al., 1998; Feeney et al., 1994; Goldner & Scharf, 2011; Main et al., 1985; Smith et al., 2018).

The Kinetic Family Drawing (KFD) is an attachment measure often used in children. The KFD involves the use of drawings in order to assess the child's attachment functioning (Burns & Kaufman, 1970; Goldner & Scharf, 2011). Because of the illustrative format of this measure, it allows the researcher/practitioner to assess attachment in children, without the use of concept-related questions to which the answers may be difficult to articulate (Amod et al., 2019; Pace et al., 2022). While careful consideration has to be given to cultural and contextual factors, studies support the use of the KFD as a means of measuring attachment in children in the South African context (Amod et al., 2019; Travers, 2015).

### **2.2.7 A Critical View on Attachment Theory in the South African Context**

Many professionals advocate for the decolonizing of psychology (Canham et al., 2021; Clay, 2017; Nsamenang & Dawes, 1998). The process of decolonizing psychology entails the intentional adaptation or development of psychological theories and practices to be more relevant and respectful of

African cultural contexts (Clay, 2017; Long, 2016). The decolonizing psychology originated as an attempt to address the misuse of psychology during the apartheid era (Clay, 2017; Long, 2016). During the apartheid era, psychological theories and assessments were used inappropriately and leveraged to justify racial segregation and oppression (Clay, 2017). While culturally appropriate practices are inherently important, injustices such as these inspire radical advocacy, further emphasizing the importance of ensuring that psychological theories are applied appropriately (Canham et al., 2021).

It is evident that attachment theory, much like other paradigms, provides an elaborate framework that can be applied to research and therapeutic settings (Tomlinson et al., 2010). However, the application thereof in the South African context necessitates careful consideration of the cultural nuances that play a role in such a diverse cultural context (Masipa & Botha, 2021; Tomlinson et al., 2010).

South Africa's cultural diversity is shaped by its complex history and socio-economic disparities (Clay, 2017; Long, 2016). Cultural context is a crucial part of parenting practices and therefore the way that we understand development, especially from an attachment perspective (Tomlinson et al., 2010). Attachment dynamics are multigenerational, impacting each new generation (Voges et al., 2019). Multigenerational dynamics such as these are part of cultural development, and oppositely, the multigenerational practices of cultural norms are also impacted by the cultural nuances within the larger context (Clay, 2017; Long, 2016). It is apparent how interconnected culture and human development are (Masipa & Botha, 2021). Therefore, it is imperative that researchers and practitioners draw on research in order to enhance their cultural competence (Masipa & Botha, 2021; Tomlinson et al., 2010).

Not only does research provide support for attachment theory's effectiveness in South Africa, but it is also considered to be particularly relevant to South African research given that attachment-related studies done in Africa served a foundational role in the development of the theory (Tomlinson et al., 2010; Voges et al., 2019). Ainsworth's work in Uganda demonstrates the universality

of attachment behaviours and the importance of caregiver sensitivity, providing cross-cultural support for attachment theory (Ainsworth, 1967; Voges et al., 2019).

Ainsworth's work thereby laid the foundation for understanding attachment in non-Western contexts (Voges et al., 2019). Studies done in other African communities such as the Gusii, Hausa, and Dogon, provide further insight into how attachment behaviours manifest in diverse settings (Tomlinson et al., 2010). Furthermore, in South Africa, research done in areas such as Khayelitsha also supports the applicability of attachment theory, proving its relevance in the conceptualization of human development as related to caregiver relationships (Tomlinson et al., 2010).

Tomlinson et al. (2005) explain that the occurrence of poverty, disease, and social inequality can impact caregiver-child relationships. This signifies how cultural context has to be considered when working from an attachment perspective, and at the same time how the development of attachment-related culturally sensitive interventions can be useful in moderating the impact that such contextual factors might have on developmental outcomes (Dlamini & Tesfamichael, 2020; Tomlinson et al., 2005).

### **2.2.8 Significance of Attachment Theory in Research**

The history of the development and expansion of attachment theory is closely related to research that has been done and that is being done in the field. Attachment-related research serves to improve the framework that attachment theory provides and is required to prove its efficacy or to improve its efficacy with regard to different population groups and different applications thereof.

Empirical evidence is crucial in promoting the credibility of attachment concepts. As seen in the history of attachment theory, the framework's development walks hand in hand with research (Ainsworth, 1978; Bowlby, 1969). It is evident that attachment theory aims to provide a comprehensive

theoretical foundation from which developmental, interpersonal, and pathological aspects of contemporary psychological phenomena can be understood (Mikulincer & Shaver, 2016).

Research on attachment experiences promotes competence in treating and managing psychiatric presentations. The attachment framework provides an evidence-based foundation from which psychological etiology and therefore treatment can be understood (Fonagy & Allison, 2016; Sroufe, 2005). By understanding their patients from an attachment perspective, practitioners become informed concerning the relational aspect of attachment-informed therapy (Kosminsky & Jordan, 2016; Mikulincer & Shaver, 2016).

By understanding secure attachment as a consequence of secure attachment experiences as related to a secure base, practitioners are challenged to not only interpret a patient's experiences, but to become the secure base they require to develop more secure attachment patterns (Allen, 2023; Mallinckrodt et al., 2017). The significance of early attachment experiences in overall psychological functioning emphasizes the importance of both early intervention and focus on these experiences in present-day interventions (Granqvist & Duschinsky, 2021; Simpson et al., 2021). Using culturally considerate measures enables this study to demonstrate results that are appropriate to the population. The contribution of this study to the pool of research on attachment, emotion regulation, and family structure, and the practical application thereof aims to positively impact the psychological well-being of South African children.

## **2.3 Literature review**

### **2.3.1 Significance of Family Environment**

Family environment has been proven to influence the emotional development of children (Cheong et al., 2017; Ma et al., 2022; Quiroga & Hamilton-Giachritsis, 2016). There is evidence that children from single-parent households – as opposed to children from nuclear families – tend to display

higher levels of avoidance and are less emotionally expressive and affectionate (Tomşa, 2019). Difference family types – single-parent households versus nuclear families – also impact attachment stability (Uçar Çabuk et al., 2021). Children from nuclear households experience more attachment stability than those from single-parent households (Uçar Çabuk et al., 2021). These studies therefore highlight family structure as core component of family environment.

Apart from the presence of the parent, parenting styles have also been shown to significantly impact the attachment security and psychological development of the child (Manning et al., 2017; Mashegoane & Ramoloto, 2016). Parenting styles are determined by various factors, including individual personality and available support (Vafaeenejad et al., 2018).

Family environment has been found to predict self-esteem which relates to the child's internal working models (Reading, 2011; Senior, 2013). Additionally, Schoon et al. (2010) underscored the long-term effects of the childhood psychosocial environment on biological responses to daily stress, indicating how the impact of a child's ability to regulate experiences of stress can extend to their physiological well-being. Factors that influence the family environment include, socioeconomic deprivation, domestic violence, family structure, and available support (Ma et al., 2022). Recent studies have moved away from the monotropic view of parenting when investigating developmental contexts that have multiple caregivers (Voges et al., 2019). This emphasizes the importance of not carelessly generalizing the findings from one context to another.

### ***2.3.1.1 Impact of Family Environment on the Mother***

Aside from the impact that the family environment has on the developing child, it also influences the mental well-being of the mother, thereby indirectly influencing the attachment bond she forms with her children (Ma et al., 2022; Zitzmann et al., 2023). For example, Casale (2015) highlighted the protective role of social support for caregiver mental health. With consideration of the difference between single-parent households and two-parent households, this

indicates that the attachment patterns of a child are not only subject to the presence of one or both parents, but that the single parent's ability to form attachment bonds with their child could indirectly be influenced by the presence or absence of a partner (Uçar Çabuk et al., 2021). The role the mother plays as a parent and the consequent parenting style she adopts is directly impacted by the presence of a partner (Uçar Çabuk et al., 2021; Vafaenejad et al., 2018). In single-parent households, the absence of a co-parent often intensifies caregiving demands, adding emotional and logistical strain. These parenting challenges can diminish the caregiver's availability and responsiveness, thereby influencing attachment formation. It is however important to consider that the nature of the relationship between a mother and her partner can determine whether the presence of a partner or extended family positively impacts her attachment bond with the child (Uçar Çabuk et al., 2021).

### ***2.3.1.2 Father-child relationships***

Although parent-child attachment dynamics are not solely determined by caregiver gender, research points to nuanced variations that may influence the nature and quality of these relationships (van Polanen et al., 2016). Studies emphasize the importance of the father-child relationship and how the nature or the presence of the relationship can directly impact the child's ability to emotionally regulate (Elhousseini et al., 2022; Shenaar-Golan et al., 2021). In a recent descriptive review of the attachment research following Ainsworth's work, Voges et al. (2019) illustrated that existing studies pertaining to attachment in the South African context, focus almost exclusively on the mother-infant dyad. It was proposed that future studies should include a focus on ancillary interactional aspects to enhance the utilization of attachment-related findings (Voges et al., 2019). Ali et al. (2021) found that family structure and socio-demographic factors can also negatively impact the fathering role. Some research suggests that father-child relationships are impacted even more greatly by socio-economic factors than mother-child relationships are (Ali et al., 2021; Palm, 2014).

Elhousseini et al. (2022) found that in a population of children aged 6-12 years in the U.S. secure internal working models about the father-child relationship were related to both better emotion regulation and lower emotional lability, while internal working models about the mother-child relationship were less significant. Father-child attachment relationships were also found to indirectly relate to child prosocial behaviour (Elhousseini et al., 2022). Cabrera (2020) emphasized the importance of both a father's quantifiable involvement in the child's life and the quality of the father-child relationship as related to the overall attachment between a father and child. On the other hand, Shenaar-Golan et al. (2021) found that variables in the context of father-child relations – such as parental anger – can promote a father-child insecure-anxious attachment relationship, contributing to difficulties in ER. In essence, father-child relationships can promote emotion regulation, however, it is not only the presence of a father that has to be considered but the quality of the father-child relationship as well.

In light of this, future research must focus on how the family environment influences the attachment and emotion development of children, especially children from vulnerable populations (Ma et al., 2022; Shenaar-Golan et al., 2021).

### **2.3.2 *The Role of Communities in the Upbringing of Children***

In addition to the family environment, a child's community context is also significant. While South Africa presents both individualistic and collectivistic cultural practices, traditional African cultures are generally collectivistic (Eaton & Louw, 2000; Laher & Dockrat, 2019). Many traditional African cultures partake in communal child-rearing practices (Matshidze et al., 2018; Nsamenang, 2002). This refers to the collaborative efforts of extended family members and community members in the upbringing of children (Nsamenang, 2002). This approach complements the role of primary caregivers, providing additional support for the parents and children (Matshidze et al., 2018).

When considering the development of the child, as related to previously discussed family dynamics, this type of communal support is crucial to consider when attempting to conceptualize attachment functioning and emotion regulation as related to caregiver bonds (Feeney & Collins, 2019; DeWall et al., 2008). Communal child-rearing impacts the parenting capacity of mothers and fathers, by providing emotional support or by taking on responsibilities and stresses (Harkness & Super, 2002; Ismail et al., 2018; Van As et al., 2020). This is particularly beneficial in low socio-economic communities (Ismail et al., 2018).

Community and extended family members can also serve as supplementary secure bases for children, impacting their attachment functioning, their ability to mentalize, and their strategies for regulating emotional states (Feeney & Collins, 2015; Van As et al., 2020). The presence of a secure base in the face of adversity significantly improves the child's ability to tolerate and overcome it (Raby et al., 2021b; Diamond, 1990).

### **2.3.3 *Attachment and Emotion Regulation***

Parent-child attachment and emotion regulation (ER) have been theoretically and empirically (Blakely & Dziadosz, 2015; Brumariu, 2015). Theoretically, secure parent-child relationships offer a meaningful context for emotion socialization of which the product is the ability to emotionally regulate (Brumariu, 2015). It is proposed that differences in parent-child attachment organization influence the development of ER and that children with secure and insecure attachments rely on different emotion regulation strategies (Brumariu, 2015). Previous studies have linked attachment to different aspects of emotion regulation such as understanding of emotions; emotional experiences and expressions; and emotion regulation strategies (Brumariu, 2015).

Attachment theory posits that early experiences with primary caregivers shape the development of internal working models, which influence an individual's ability to regulate emotions and form relationships throughout life (Vrtička &

Vuilleumier, 2012). Attachment behaviours and attachment styles can be viewed as adaptive in the way that they develop over time in response to the child's attachment experience (Ein-Dor & Hirschberger, 2016). This adaptiveness is often key to a child's psychological and even physiological survival (Ein-Dor & Hirschberger, 2016). The adverse effects of developing insecure attachment styles are therefore not necessarily seen in the child's immediate circumstances, but rather in the long-term consequences thereof (Ein-Dor & Hirschberger, 2016).

Attachment insecurity has been consistently linked to emotion dysregulation, and this relationship mediates the development of symptoms of depression and generalized anxiety disorder (Dagan et al., 2018; Marganska et al., 2013). The findings of Panfile and Laible (2012) further support this by demonstrating that attachment predicts empathy through the mediation of emotion regulation. Furthermore, Lenzi et al. (2013) discovered that attachment models affect brain responses in areas related to emotions and empathy. In addition to this, Taube-Schiff et al. (2015) revealed that dismissing attachment influences brain responses during a task eliciting attachment, highlighting the neural correlates of attachment-related emotion regulation processes.

Moreover, the Adult Attachment Interview (AAI) has been suggested to primarily assess social emotion regulation capacities (Allen & Miga, 2010). This indicates that secure attachment may promote effective emotion regulation, while insecure attachment, particularly anxiety and avoidance, is associated with emotion dysregulation and suppression (Brenning et al., 2012). The impact of attachment on emotion regulation is further evidenced by the study of Brumariu et al. (2012), which found that attachment security priming modulates amygdala reactivity to threat. It has also been found that attachment styles are associated with differences in the perception of emotion-laden stimuli, influencing the way that emotions are experienced and therefore dealt with (Craparo et al., 2014). In a South African study done by Mashegoane and Ramoloto (2016), it was found that the avoidant dimension of attachment was related specifically to internalizing problems. Another study investigated the association between attachment-related symptoms as seen in attachment-related disorders such as

reactive attachment disorder (RAD), and symptoms of disinhibited social engagement disorder (DSED) (Elovainio et al., 2015). The aforementioned study found that the prevalence of attachment-related symptoms in early childhood was associated with an increased risk of the child developing emotional and behavioural problems later in life (Elovainio et al., 2015). These findings further support the significance and complexity of the relationship between attachment and emotion regulation as relevant to psychological development and pathology.

Brumariu (2015) highlighted that while a lot of research has been done on the relationship between attachment and emotion regulation, only a few studies have been done on factors that influence the relationship between the two. Furthermore, Pearson (2013) warned that it is important to not only understand the strength of the relationship between emotion regulation and attachment but also to acquire information specific to the context and experiences at hand. Thereby a research gap is indicated in that the attachment functioning and emotion regulation should not be viewed in isolation, but rather as being subject to their unique experiences and context.

#### **2.3.4 *Emotion Regulation Strategies***

Gross (2002) defines emotion regulation as the processes through which individuals influence the emotions they experience, determining when and how these emotions are expressed. Emotion regulation has been the focus of several studies in South Africa (Stols et al., 2024). Stols et al. (2024) found that there is a significant relationship between emotion regulation and academic success. Emotion regulation has been linked to challenges related to managing stress and anxiety, stressing the importance of emotion regulation strategies in supporting mental well-being and adaptive functioning in important life domains (Aldao et al., 2010; Maharaj & Ramsaroop, 2024).

Cognitive reappraisal and expressive suppression, originally identified by Gross (2002), are two commonly studied emotion regulation strategies. Cognitive

reappraisal relates to altering one's thinking about an experience to alter the emotional response to that experience, while expressive suppression entails limiting the expression of an emotion (Ferschmann et al., 2021).

Gresham and Gullone (2012) investigated these emotion regulation strategies in relation to attachment and found that children who were securely attached relied more on cognitive reappraisal, while children who were insecurely attached relied more on expressive suppression. These findings were aligned with attachment strategies, proposing that to maintain attachment with caregivers, children developed these emotion regulation strategies accordingly (Gresham & Gullone, 2012).

Brockman et al. (2017) explored emotion regulation strategies in daily life, focusing on mindfulness, cognitive reappraisal, and emotion suppression. The findings of this study indicated that while cognitive reappraisal was associated with adaptive emotion regulation, emotion suppression showed less favourable outcomes, highlighting the differential effects of various emotion regulation strategies in real-life contexts (Brockman et al., 2017).

### **2.3.5 Consequences of Emotion Dysregulation**

**2.3.5.1 Overview of the consequences of Emotion Dysregulation.** Several studies have explored the diverse consequences of emotion dysregulation. In children, emotion dysregulation is associated with a decreased use of constructive coping strategies and therefore a decreased likelihood of coping with adverse events (Saija et al., 2022). Furthermore, emotion dysregulation and insecure attachment in children are associated with greater symptoms of psychopathology in adulthood (Pascuzzo et al., 2015).

These associations underscore the foundational role of emotion regulation in psychological resilience. Rather than functioning as a discrete trait, emotion regulation appears embedded within broader developmental systems influenced by caregiver responsiveness, relational stability, and contextual

stressors. The interplay between dysregulation and environmental factors suggests a transactional process, where early emotional vulnerabilities may be exacerbated or buffered by familial and cultural conditions.

**2.3.5.2 Emotion Dysregulation and Psychopathology.** Cavanagh et al. (2017) highlighted that emotion dysregulation underlies several psychological disorders, including bipolar disorder, anxiety disorders, oppositional defiant disorder, and post-traumatic stress disorder. Furthermore, the presence of maladaptive emotion regulation strategies has been found to strongly correlate with both internalizing and externalizing behaviour problems (Goagoses et al., 2023).

Supporting evidence suggests that emotion dysregulation is linked to the manifestation of anxiety- and depression-like behaviours (Christ et al., 2019). McLaughlin et al. (2009) uncovered a connection between peer victimization, emotion dysregulation, loneliness, and anxiety, suggesting that emotion dysregulation may contribute to the persistence of negative social experiences and emotional difficulties in individuals who have been victimized. Additionally, Predescu et al. (2020) emphasized that emotion dysregulation is associated with difficulties in emotional and behavioural regulation, executive function vulnerabilities, and attention vulnerabilities.

While emotion dysregulation is not causative of neurodevelopmental disorders such as ADHD, it is still significant in how emotion dysregulation accompanying this disorder can significantly contribute to impairments (Khan et al., 2020). Rogers et al. (2021) found that emotion dysregulation among young adolescents with ADHD is linked to social impairment in particular, suggesting that emotional challenges may be as impactful as attentional deficits. In therapeutic contexts, this highlights the importance of integrative approaches that address both behavioural symptoms and emotional capacity to foster social adjustment.

Emotion dysregulation and insecure attachment in childhood have also been linked to substance use and maladaptive eating behaviours (Takgbajouah et

al., 2024; Uccula et al., 2020). These associations suggest that early emotional difficulties may contribute to maladaptive regulatory attempts that extend across domains of functioning, often reinforcing negative emotional cycles and compromising long-term wellbeing.

**2.3.5.3 Emotion Dysregulation and Prosocial Behaviour.** While there are conflicting studies on the influence of emotion regulation on empathy and prosocial behaviour, emotion dysregulation has been shown to negatively correlate with prosocial behaviour such as altruism (Elhousseini et al., 2022; Panfile & Liable, 2012). The ability to emotionally regulate does not necessarily predict prosocial behaviour but is rather indicative of the capacity for empathy which mediates between emotion regulation and prosocial behaviour (Elhousseini et al., 2022; Panfile & Liable, 2012).

### **2.3.6 Attachment Functioning, Family Structure, and Emotion Regulation**

Attachment theory provides a comprehensive framework for understanding how children establish emotion connections with their caregivers and how these connections intricately shape their behaviour, emotions, and overall developmental trajectory (Bowlby, 1988). Extensive literature highlights that the cultivation of a child's emotion regulation abilities is inherently tied to the establishment of a meaningful context for emotion socialization within parent-child relationships (Brumariu, 2015; Sutton, 2019). Attachment problems have also been directly linked to the prevalence of mental disorders (Blakely & Dziadosz, 2015). As discussed, insecure attachment has been linked to long-term consequences, consistently linked to emotion dysregulation as related to the development and dynamics of mental disorders (Ein-Dor & Hirschberger, 2016 Dagan et al., 2018; Marganska et al., 2013).

The ability to regulate one's emotions, the capacity for open communication, and the capacity for adaptive action are all interconnected and vary in tandem (Costello, 2013; Ding et al., 2014). As mentioned, emotion regulation can be conceptualized as the processes through which individuals influence the emotions experienced, determining how they are expressed (Gross, 2002). As

mentioned, Gross (2002) identified two primary strategies: 1) cognitive reappraisal (which entails adjusting the way one thinks about an experience to alter its emotional impact); and 2) expressive suppression (which entails inhibiting behavioural expressions of emotion). A parallel can be drawn between this understanding of emotion regulation and mentalization, a concept that is closely related to attachment functioning.

With cautious appreciation of the multitude of factors involved in the family environment, attachment theory's focus on parent-child relationships offers an opportunity for exploration of the significance of family environment in child development, while family environment serves as an unmissable factor in these parent-child attachment relationships (Sutton, 2019). From an attachment perspective, the link between emotion regulation and parent-child communication and interaction dynamics is evident (Costello, 2013). This emphasizes that the ability to regulate emotions is directly associated with attachment functioning as related to the nature and presence of parent-child relationships.

Studies emphasize how complex family dynamics are and how diverse they can be in the South African setting (Laher & Dockrat, 2019; Botha et al., 2018). The family environment is a system, where not only the dyadic parent-child relationships have to be considered, but also the impact of the environment on the parents themselves, and therefore their ability to perform their roles as mothers and fathers (Ali et al., 2021; Casale, 2015; Ma et al., 2022; Uçar Çabuk et al., 2021). Additionally, research emphasizes the importance of the father's role in a child's development (Elhousseini et al., 2022; Shenaar-Golan et al., 2021). There is also opposition to the notion that a nuclear family is the optimal family structure, not disputing the importance of family structure but rather further emphasizing the complexity thereof (Rabe & Naidoo, 2015).

As such, different family environment factors, such as family structure (i.e. single-parent households or two parent-households), impact the development of attachment bonds, subsequently influencing emotion regulation strategies and communication patterns in children.

## 2.4 Conclusion

This study is concerned with the association between attachment functioning and emotion regulation, as well as the influence of family structure on these variables. As such, this chapter aimed to conceptualize Attachment theory as a framework from which attachment functioning and emotion regulation can be understood, highlighting the significance of family structure and parent-child interactions. Existing literature illustrates how family structures can impact both the attachment and emotion regulation of children. The dynamics between attachment and emotion regulation were explored, and the complexities thereof have been highlighted. Emotion regulation has proven to be a key aspect of the psychological development and wellbeing of individuals. This study places focus on the attachment functioning and emotion regulation of a group of children from a community in South Africa (Mankweng), placing family structure as a significant factor, core to a family's functioning.

## **Chapter 3: Methodology**

### **3.1 Introduction**

This chapter provides an account of the research methodology applied in the current study. It delves into the specifics of the sample selection and identification, the chosen research design, the tools utilized for data collection, the methods employed for data analysis, and the ethical considerations integrated into the research approach.

### **3.2 Research Approach**

The study utilizes a quantitative research approach. Under Creswell (2014), quantitative research largely involves a deductive approach wherein theoretical models, articulating connections between variables, are examined within the data. Given the nature of quantitative research and the aim of this study, a post-positivist paradigm was proposed, which postulates that knowledge is derived through observation and empirical facts while emphasizing that all observation is fallible and that the understanding of reality is influenced by biases and contexts (Jansen, 2019; Leavy, 2017).

### **3.3 Research Design**

The study used a cross-sectional design. Cross-sectional designs are non-experimental designs that involve the measuring of relevant variables at a specific time, meaning that participants are only assessed once (Babbie, 2013; Maree & Pietersen, 2019b). Theoretical frameworks such as Bowlby's attachment theory and Gross's emotion regulation model provide operational definitions that can be quantitatively assessed. Accordingly, associations between these constructs can be meaningfully explored within a cross-sectional framework. This design is therefore well suited to the study's aim of testing theoretically derived hypotheses, as it enables the examination of

established psychological constructs through measurable variables at a single time point

### **3.4 Participants**

#### **3.4.1 Participant Overview**

A purposive sample of 33 participants (ages 7-12) from the Hlatlaganya drop-in-centre (055-724 NPO) was selected for the study. The sample selected consisted of twenty children from single-parent households and the other thirteen from nuclear/two-parent households.

#### **3.4.2 Proposed Sample Size**

A sample size of 30-40 participants was proposed. This sample size was determined by the parameters of the population in terms of population size, access to participants, and freedom of consent. In addition to these considerations, a priori power analysis was conducted, highlighting a limitation in the statistical power of the results.

For the priori power analysis, the protocol followed used G\*Power to conduct an F test, specifically an ANOVA with fixed effects, special, main effects, and interactions. The input parameters included: 1) an effect size ( $f$ ) of 0.25; 2) an alpha error probability ( $\alpha$ ) of 0.05; and 3) a power ( $1-\beta$  error probability) of 0.80 (Faul et al., 2007). The power analysis indicated a preferred sample size of 128 participants.

However, according to the caregivers at the Hlatlaganya drop-in-centre, the total amount of children that they support is close to 100. Secondly, this study only included participants within the age range of 7-12 years who could fluently speak English or Sepedi, limiting the portion of the population that would be eligible to be part of this study. Based on this collateral information, a sample

size of 30-40 participants was proposed, with the researchers effectively being able to recruit a total of 33 participants.

### **3.4.3 Sampling Method**

Purposive sampling, a non-probability sampling method, was used as a means of selecting participants following a specific purpose in mind (Maree & Pietersen, 2019a). To measure the study's specific variables in the applicable population group, participants were selected according to specific inclusion and exclusion criteria. The recruitment process is elaborated on in section 3.7.

### **3.4.4 Inclusion/Exclusion Criteria**

Participants included in the study met several criteria. Participants had to be between the ages of 7 and 12 years. All genders were included. Participants had to geographically reside in Mankweng and classify as recipients of support at the Hlatlaganya drop-in centre. Only participants who were fluent in either Sepedi or English could participate. Lastly, participants had to either belong to a single-parent or two-parent household.

Participants were excluded if they were younger than 7 years or older than 12 years of age. Exclusion also applied to participants with specific health or mental conditions that could interfere with the study, such as Intellectual or Developmental Disability (IDD) or severe visual impairment.

## **3.5 Instruments**

This study was part of a larger study, and therefore several instruments were used for data collection. Instruments applicable to this study included a demographic questionnaire, the Kinetic Family Drawing (KFD), the Kinetic Family Drawing Revised Interview Questionnaire (KFD-R-IQ), and the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) (Knoff &

Prout, 2007; Lee et al., 2017). Additionally, the Rorschach test and the Thematic Apperception Test (TAT) were administered as part of the sister studies.

### **3.5.1 Kinetic Family Drawing**

The Kinetic Family Drawing (KFD) involves the examiner directing the child to draw a picture of themselves, and everyone in his or her family, doing something (Goldner & Scharf, 2011). This projective measure is used to determine a child's attachment functioning.

The Kinetic Family Drawing Revised Interview Questionnaire (KFD-R-IQ) was verbally administered in addition to the KFD to obtain collateral information about the family unit from the drawer's perspective (Lee et al., 2017). This was done to ensure a well-grounded interpretation of the KFD. The questionnaire consisted of 16 items (Lee et al., 2017).

Kaplan and Main's coding system and Fury's Global Rating Scales were used to score and categorize results into the following attachment categories: secure, avoidant, ambivalent, and disorganized attachment (Fury et al., 1997; Goldner & Scharf, 2011). Avoidant, ambivalent, and disorganized groups were then grouped into their overarching category, insecure attachment. All participants therefore belonged to the 1) secure attachment or 2) insecure attachment category.

Amod et al., (2019) state that after a comprehensive review of literature and research, KFD scales were concluded to have a high degree of inter-rater reliability in the South African context. Inter-rater reliability for the individual markers of Kaplan and Main's coding system has ranged from 0.75 to 1.00 (Cohen's  $k$ ) and for the attachment classifications from 0.64 to 0.80 (Cohen's  $k$ ) (Behrens & Kaplan, 2011; Fury et al., 1997; Madigan et al., 2003; Pianta & Longmaid, 1999). The inter-rater reliability for Fury's Global Rating Scales ranged from 0.54 to 0.94 (Pearson's  $r$ ) (Fury et al., 1997; Madigan et al., 2003).

### **3.5.2 Emotion Regulation Questionnaire for Children and Adolescents**

The Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) is a self-report measure of emotion regulation suitable for use with children and adolescents (ages 7-18) (Chen et al., 2023; Gross & John, 2003). ERQ-CA is a 10-item scale designed to assess individuals' inclination to regulate emotions through two distinct approaches: (1) Cognitive Reappraisal and (2) Expressive Suppression (Gross & John, 2003). This measure was adapted from the original Emotion Regulation Questionnaire (ERQ) to better suit younger populations (Bariola et al., 2012; Gullone & Taffe, 2012; Ng et al., 2019). The adaptation thereof involved simplifying item wording and reducing the response scale to a 5-point format (Gullone & Taffe, 2012). Adjustments to this scale were made to accommodate the age and linguistic profiles of the respondents. Refer to section 4.3 for further details.

Existing research provides support for the validity and reliability of ERQ-CA (Chen et al., 2023; Gullone & Taffe, 2012; Ng et al., 2019; Villacura-Herrera et al., 2022). These studies demonstrate that the ERQ-CA possesses good internal consistency, measurement invariance, and stability over time as well as good construct, convergent, and discriminant validity (Chen et al., 2023; Gullone & Taffe, 2012; Ng et al., 2019; Villacura-Herrera et al., 2022).

Confirmatory Factor Analysis (CFA) from several studies indicates that the two-factor model (cognitive reappraisal and expressive suppression) provided a good fit to the data, supporting construct validity (Chen et al., 2023; Gullone & Taffe, 2012). To investigate and support convergent and discriminant validity, studies have compared the ERQ-CA's Cognitive Reappraisal (CR) scale and Expressive Suppression (ES) scale to the scales of tests that measure similar as well as opposite constructs (Chen et al., 2023; Gullone & Taffe, 2012; Villacura-Herrera et al., 2022). These tests included the CDI (Children's Depression Inventory), the Big-Five Questionnaire for Children (BFQ-C), the Cognitive Behavioral Therapy Skills Questionnaire (CBTSQ), the Suicide Ideation Questionnaire Junior (SIQ-JR), the Multidimensional Adolescent

Functioning Scale (MAFS) and the Patient Health Questionnaire-9 (PHQ-9) (Chen et al., 2023; Gullone & Taffe, 2012; Villacura-Herrera et al., 2022).

### **3.6 Ethical Considerations**

Ethical clearance was obtained from the following ethical committees: Departmental Research Ethics Committee (DREC), School of Social Sciences Research Committee (ScREC), Faculty of Higher Degrees Committee (FHDC), and Turfloop Research Ethics Committee (TREC) (project number: TREC/1598/2024: PG). After gaining the necessary approval from the University, the researchers approached the Hlatlaganya Drop-in-Centre's management for gatekeepers' permission.

### **3.7 Procedure**

The study was conducted in collaboration with other researchers, as part of a larger project. The study assumed, consistent with the South African Bill of Rights and Children's Act [No.38 of 2005], a rights-based position regarding the participation of children in research (Republic of South Africa, 2005).

Once ethical approval was obtained from the Turfloop Research Ethics Committee (TREC), the head of Hlatlaganya Drop-in-Centre was approached and gatekeepers' permission was obtained. The head of the centre was responsible for communicating with the parents concerning possible participation of their children in the study. Hlatlaganya Drop-in-Centre management liaised with caregivers to identify eligible children based on the inclusion criteria. As a gatekeeper, the head helped to coordinate with the parents to schedule a meeting during which the possibility of their children participating in the study was discussed.

Informed consent was sought from the legal guardians and parents of the participants, while the children were required to assent to participation in the research. The process of obtaining informed consent adhered to application

principles outlined in the Belmont Report (NCPHSBBR, 1979). These principles are centred around providing relevant information, ensuring comprehension thereof, and emphasizing the voluntary nature of consent (NCPHSBBR, 1979).

Before data collection, the legal guardians of participants were thoroughly briefed on what it entails, where informed written consent was obtained. The researchers appropriately elaborated on the purpose and aim of the study; potential risks and benefits; the role of participants; the role of the researcher; and what course of action would be followed. As part of the role of participants, emphasis was placed on how participation is completely voluntary and that the legal guardians and participants should feel free to withdraw from the study – at any stage - if they felt it was necessary (Leavy, 2017). The legal guardians and participants were assured that their privacy and confidentiality were held in high regard. They were also informed of possible emotional distress that may result from participating in a study like this (Babbie, 2013). Precautions were put in place to prevent or contain any psychological distress that might have been caused. In the case that a participant reported distress after participating in the study, they were referred for (prearranged) psychological help at the Psychology Clinic (University of Limpopo) at no cost to them.

Following the informing process, the legal guardians could choose whether they are interested in having their children participate in the research process. Thereafter, those who were interested were required to sign the informed consent form. In addition to the legal guardians signing the informed consent form, the participants themselves – despite not being of age to give consent – were required to give assent, thereby respecting their autonomy and confirming that their participation was informed and voluntary.

Appointments for the sake of data collection (test administration) were made with consenting participants. To ensure that the participant's privacy is upheld, the data collection site was assessed or adjusted to ensure that the interview process could not be observed or overheard by bypassing or other individuals. (Leavy, 2017). Due to consideration of the age and language barriers present, the researchers made use of translation services. The measures (including

those applicable to the larger study) were administered in the following order: 1) demographic questionnaire; 2) KFD; 3) KFD-R-IQ; 4) TAT; 5) Rorschach; and 6) ERQ-CA. Due to the researcher-participant dialogue involved, the demographic questionnaire, KFD-IQ, TAT, Rorschach, and ERQ-CA were administered individually. In contrast, the KFD was administered in alternating groups of five to enhance time efficiency and reduce the risk of participant fatigue across the testing period.

Participant confidentiality was instigated by ensuring participant anonymity. Their names were either omitted from the results or special code names were used. The collected data was stored electronically (password protected) in the Department of Psychology (University of Limpopo) archiving for a minimum period of 15 years, including for reuse by other researchers. Access to the data records will only be available to the researchers, research supervisors, and individuals relevant to data analysis who are subject to a confidentiality contract (Babbie, 2013).

### **3.8 Data Analysis**

The data analysis was conducted using IBM SPSS Statistics 30.0.0 (IBM Corp., 2025). Attachment functioning is presented in two overarching categories: secure and insecure. The insecure category includes avoidant, ambivalent, and disorganized attachment functioning. The significance level for all analyses was set at  $p < .05$ . To investigate the association between attachment functioning and emotion regulation, as well as the possible moderating role of family structure, crosstabulation and 2-way ANOVA analyses were conducted.

Formal moderation analysis was not performed due to sample size restrictions. Instead, crosstabulation analysis and ANOVA were employed as alternative methods to explore the relationships between the variables. Crosstabulation was used to examine the distribution of cognitive reappraisal and expressive suppression scores across different levels of attachment security and household types.

The 2-way ANOVA was then utilized to assess the main effects and interaction effects of attachment security and household type on emotion regulation strategies. 2-way ANOVA compares the mean differences between groups that have been split on two independent variables (Tabachnick & Fidell, 2013). The factorial design allowed for the analysis method best suited to the data in addition to meeting the following assumption checks pre-analysis: (1) Independent variables must be categorical and have at least 2 or more factors, (2) Dependent variable must be continuous, and (3) Samples of observations must be independent from one another (Tabachnick & Fidell, 2013).

These methods were chosen to provide a comprehensive understanding of the relationships between attachment functioning, emotion regulation, and family structure within the constraints of the available data. The use of crosstabulation allowed for an initial exploration of the data, while the 2-way ANOVA provided a more detailed analysis of the potential moderating effects of family structure.

### **3.9 Conclusion**

This chapter was dedicated to the methodological facets of the study, offering a summary of the procedures undertaken in its execution along with the ethical considerations that guided the process. The subsequent chapter will present the study's results and data analysis.

## **Chapter 4: Results**

### **4.1 Introduction**

This chapter presents the demographic information of the participants, the results of the pilot study, and the findings from the crosstabulation and 2-way ANOVA analyses conducted to address the research questions outlined in section 3.8. The analyses aim to investigate the association between attachment functioning and emotion regulation, as well as the possible moderating role of family structure.

The inter-item reliability of the ERQ-CA scales – CR (Cognitive Reappraisal) and ES (Expressive Suppression) – yielded Cronbach's alpha coefficient values of 0.518 and 0.523 respectively. The KFD's inter-rater reliability (between three raters) produced Cohen's Kappa values of 0.631, 0.728, and 0.654 (for pairwise comparison).

### **4.2 Participant Demographics**

Table 1 outlines the demographic information of the participants that were involved in this study.

**Table 1**  
*Participant Demographics*

Characteristics	Category	Frequency	Percentage
Age	7	4	12
	8	1	3
	9	4	12
	10	11	33
	11	6	18
	12	7	21
Sex	Male	19	58
	Female	14	42
Educational Level	Grade 1-3	11	33
	Grade 4-7	22	67
Ethnic Group	Black/African	33	100
Type of Family Household	Single-Parent Household	20	61
	Two-Parent Household	13	39

### 4.3 Pilot Study

A preliminary pilot study was carried out with 5 participants to test the usability, comprehensibility, and reliability of the chosen data collection method (Lancaster et al., 2004). The pilot study revealed that the 5-point Likert scale was confusing and difficult for many respondents to use effectively. This implicated that simplification was required to improve the quality and efficiency of the main study. According to Moore and Mellor (2003), in populations where there are linguistic limitations, participants often resort to providing random or careless responses, however using a 3-point scale could reduce the occurrence of that, thereby aiming to ensure that the data collected offers a more accurate reflection of the respondents' emotion regulation strategies. For that reason, a 3-point Likert scale was utilized as a means of simplifying the response process and enhancing data quality (Mellor & Moore, 2014; Kusmaryono et al., 2022).

#### **4.4 Data Analysis**

Herewith follows a description and representation of the data analysis that was conducted to address the study objectives.

##### ***4.4.1 Crosstabulation – the Association between Attachment Functioning and Emotion Regulation***

A calculation of the Eta was conducted to establish the association between attachment and emotion regulation (ER). In the analysis ER was entered by its dimensions, either Cognitive Reappraisal or Expressive Suppression. Results show that when Cognitive Reappraisal is the dependent variable the coefficient of determination is .230, suggesting that 23% of the variance of Cognitive Appraisal can be explained by the attachment of the participants. On the other hand, when the Expressive Suppression dimension is the dependent variable the coefficient of determination is .012, meaning that only 1.2% of the variance of Expressive Suppression is accounted for by participants' attachment levels.

##### ***4.4.2 Crosstabulation – the Association between Attachment Functioning and Emotion Regulation in the presence of Family Structure***

A further analysis was conducted to investigate the association of Attachment and ER but this time in the presence of the third variable, namely, family structure. Only the Cognitive Reappraisal component of ER was analysed (see Table 2). A three-way contingency analysis was conducted, due to the limitations presented by the sample size. The association between the explanatory and the response variables were further explored.

**Table 2**

*Crosstabulation of Attachment Security and Cognitive Reappraisal by Household Type*

Household Type	Attachment Security	CR Q1	%	CR Q2	%	CR Q3	%	Total
Single-parent	Secure	7	50.0	5	35.7	2	14.3	14
	Insecure	0	0.0	1	16.7	5	83.3	6
	Total	7	35.0	6	30.0	7	35.0	20
Two-parent	Secure	3	37.5	3	37.5	2	25.0	8
	Insecure	2	40.0	1	20.0	2	40.0	5
	Total	5	38.5	4	30.8	4	30.8	13
Overall Total		12	36.4	10	30.3	11	33.3	33

In this analysis a two-way family structure variable was entered as a control variable. The resultant two partial tables were each inspected separately for patterns. Although the chi-square of the total group indicates that attachment and ER are associated ( $X^2 = 6.845$ ,  $df = 2$ ,  $p$ -value = 0.03), the contributing factor in the significance is the single parent family structure which has a statistically significant chi-square ( $X^2 = 9.229$ ,  $df = 2$ ,  $p$ -value = 0.01). The chi-square of the two-parent family was not statistically significant ( $X^2 = 0.536$ ,  $df = 2$ ,  $p$ -value = *ns*). Securely attached participants from single-parent family structures reported higher rates of ER.

#### **4.4.3 2-Way ANOVA Results for Cognitive Reappraisal**

This section focuses on the impact of attachment functioning and household type on the participants' inclination to use cognitive reappraisal (CR) as an emotion regulation strategy. To examine both their independent contributions and the potential interaction between these variables, a 2-Way ANOVA was

employed. The results of this analysis are outlined in Table 3 and Table 4, providing a statistical overview that guides the subsequent discussion.

**Table 3**

*ANOVA Results for the Impact of Attachment Security and Household Type on Cognitive Reappraisal*

Cases	Sum of Squares	df	Mean Square	F	p	$\omega^2$
Attachment Security	55.102	1	55.102	10.559	<b>0.003</b>	0.201
Household Type	4.066	1	4.066	0.779	0.385	0.000
Interaction Effect: Attachment Security & Household Type	23.275	1	23.275	4.460	<b>0.043</b>	0.073
Residuals	151.337	29	5.219			

*Note. Type III Sum of Squares*

A significant main effect of attachment security on CR is present. This is indicated by an F-value of 10.559 and a p-value of 0.003. These results suggest that attachment security has a notable impact on the use of CR as an ER strategy, with a moderate size effect ( $\omega^2 = 0.201$ ). These results support the presence of a significant association between attachment functioning and emotion regulation, thereby disproving the null hypothesis and favour alternative hypothesis 1.

Household type was found to have no significant effect on CR, implying that household type alone does not significantly influence the use of CR as an ER strategy within the sample group. There was however a significant interaction effect between attachment security and household type, indicated by a F-value of 4.460 and a p-value of 0.043. A small to moderate effect size was implied ( $\omega^2 = 0.073$ ). This suggests that the impact of attachment security on the use of CR varies depending on the household type of the individual. These results then

indicate that family structure has a significant moderating effect on the relationship between attachment functioning and emotion regulation, disproving the null hypothesis and supporting alternative hypothesis 2.

Simple main effects were also considered (Table 4), looking at whether there is a difference in the attachment factor on all levels of household type.

**Table 4**

*Simple Main Effects of Attachment Security on Cognitive Reappraisal by Household Type*

Cases	Sum of Squares	df	Mean Square	F	p
Single-parent household	88.688	1	88.688	16.995	< .001
Two-parent household	2.925	1	2.925	0.561	0.460

In this analysis, the single-parent household group yielded an F-value of 16.995 and a p-value of less than 0.001. This isolates the effect of attachment security on CR in single-parent household groups specifically. The low p-value indicates that attachment security had a significant effect on CR within the single-parent household group. On the other hand, the two-parent household group field had an F-value of 0.561 and a p-value of 0.460. The p-value was marginally below the 0.05 cut-off, suggesting that the effect of attachment security on CR in two-parent household groups was not significant.

When summarizing effect sizes ( $\omega^2$ ), attachment alone accounts for 20.1% of variance (large effect size). Household alone is not sig and has no practical effect size, but the interaction of the two accounts for a medium effect size, accounting for 7.3% of variance. When observing the F statistic (F = variation between sample means/variation within the samples), single-parent households have a greater value (F = 16.996) when compared to two-parent households (F = 0.561). Therefore, the differences can be considered as a result of between-group differences instead of within-group differences in the

single-parent household. Whereas the two-parent household result could be the result of within-group effects.

#### 4.4.4 2-Way ANOVA Results for Expressive Suppression

This section features the analysis of the impact of attachment functioning and household type on the participants' inclination to use expressive suppression (ES) as an emotion regulation strategy. The results are presented in Table 5 and Table 6, followed by a brief discussion thereof.

**Table 5**

*ANOVA Results for the Impact of Attachment Security and Household Type on Expressive Suppression*

Cases	Sum of Squares	df	Mean Square	F	p	$\omega^2$
Attachment Security	1.989	1	1.989	0.307	0.584	0.000
Household Type	1.308	1	1.308	0.202	0.657	0.000
Interaction Effect: Attachment Security & Household Type	0.657	1	0.657	0.101	0.752	0.000
Residuals	187.908	29	6.480			

*Note. Type III Sum of Squares*

**Table 6**

*Simple Main Effects of Attachment Security on Expressive Suppression by Household Type*

Cases	Sum of Squares	df	Mean Square	F	p
Single-parent household	2.917	1	2.917	0.450	0.508
Two-parent household	0.156	1	0.156	0.024	0.878

No significant effects were found. Therefore, attachment, household type, and interaction between these variables failed to have any significant effect on ES in this sample. Due to this, no further interpretations were conducted.

#### **4.5 Conclusion**

Based on the results of the crosstabulation and 2-way ANOVA analyses, significant differences in emotion regulation were found within the Cognitive Reappraisal (CR) scale. Attachment security and the interaction between attachment security and household type exerted significant effects on CR, with attachment security accounting for a larger variance than the model including interaction effects. The moderating role of household type on the relationship between attachment security and emotion regulation was evident, particularly in single-parent households, which displayed greater between-group differences compared to two-parent households. This suggests that household type alone does not exert a significant effect on emotion regulation; rather, it is the interaction with attachment security that influences emotion regulation, specifically within the CR scale. No significant effects were found for Expressive Suppression (ES), indicating that attachment security and household type do not significantly influence ES within this sample. These findings underscore the importance of considering both attachment security and family structure in understanding emotion regulation strategies in vulnerable children. Further research with larger sample sizes and additional variables is recommended to fully elucidate these relationships.

## **Chapter 5: Discussion**

### **5.1 Introduction**

This study aimed to examine the relationship between attachment functioning and emotion regulation in vulnerable children in Mankweng, Limpopo, and to explore the moderating influence of family structure on this relationship. This chapter discusses the findings of this study, including the results of the crosstabulation and ANOVA analyses, while also addressing limitations and recommendations for future research.

### **5.2 Attachment Functioning and Emotion Regulation**

The first research objective was to examine whether there is a statistically significant relationship between attachment functioning and emotion regulation in vulnerable children in Mankweng, Limpopo. The findings of the crosstabulation analyses highlighted the differential impact of attachment security on various dimensions of emotion regulation, with a more pronounced effect on cognitive reappraisal. Supportingly, the ANOVA results demonstrated that attachment security has a significant effect on the use of CS as an emotion regulation strategy. This finding aligns with existing literature, that supports the notion that secure attachment is associated with more adaptive emotion regulation strategies (Gresham & Gullone, 2012; Brumariu, 2015; Ein-Dor & Hirschberger, 2016). Cognitive reappraisal, as defined within the context of this study, is considered an adaptive emotion regulation strategy, developmentally beneficial and showing favourable outcomes in terms of the child's ability to cope with or overcome difficulty (Ferschmann et al., 2021; Gross, 2002).

Emotion regulation strategies, such as cognitive reappraisal and expressive suppression, are closely related to attachment on a theoretical level. As previously conceptualized, cognitive reappraisal involves altering one's thinking about an experience to change its emotional impact, which is often facilitated by secure attachment relationships (Ferschmann et al., 2021). Secure

attachment provides a foundation for open communication and mentalization, where children learn to understand and manage their emotions through interactions with their caregivers (Fonagy & Luyten, 2009). Mentalization, the ability to interpret one's own and others' behaviour in terms of mental states, aligns with the concept of cognitive reappraisal and can be considered implicit in the process thereof (Bateman & Fonagy, 2016). This reiterates the theoretical association between attachment security and the development of adaptive emotion regulation strategies such as CR, and it explains this phenomenon as found in this study.

On the other hand, both the crosstabulation analysis and ANOVA showed no significant association between attachment security and ES. In contrast to CR, ES involves inhibiting the outward expression of emotions, which is typically associated with insecure attachment (Ferschmann et al., 2021; Gross, 2002).

Insecure attachment often results in communication being restricted. Deactivation of attachment behaviours, such as parent-child communication, is a response to insensitivity in caregiving and the child's inability to form a secure attachment bond with their caregiver (Blakely & Dziadosz, 2015; Gagliardi, 2021; Mikulincer & Shaver, 2016). As discussed previously, a child's development and, therefore, use of emotion regulation strategies is understood as a response to their early attachment experiences. The use of ES can, therefore, be conceptualized as a result of a child's decreased expression of emotions or needs as a requirement to protect their bond with their caregivers (Cassidy, 2016; Gross, 2002).

As mentioned, no statistically significant relationship was found between attachment security and ES. Despite the theoretical support for the association between attachment security and ES and the support thereof in literature, previous studies have also presented mixed results regarding the relationship between attachment and expressive suppression (Brockman et al., 2017; Elhusseini et al., 2022; Shenaar-Golan et al., 2021). Furthermore, while no significant relationship was proven, it can also not be concluded that there is no relationship between the variables. Psychological phenomena such as

attachment functioning and emotion regulation are complex and difficult to study in isolation. To better address and understand the complexity of this association, future studies could use larger sample sizes, a broader range of measures, or a longitudinal experimental design (Brockman et al., 2017; Brenning et al., 2012).

Conclusively, the findings of this study disprove the null hypothesis that there will be no significant association between attachment functioning and emotion regulation in vulnerable children and support alternative hypothesis 1 that there will be a significant association between attachment functioning and emotion regulation in vulnerable children. However, this is only true regarding the emotion regulation strategy, CR, and not ES. These findings suggest that while attachment security is related to cognitive reappraisal, the relationship between attachment and expressive suppression is more complex and influenced by multiple factors. This highlights the need for further research to understand the intricacies of these relationships, especially in under-researched population groups.

### **5.3 The Moderating Role of Family Structure**

Crosstabulation analysis incorporating family structure as a moderating variable revealed that the association between attachment security and cognitive reappraisal is significantly influenced by household type. This analysis indicated that securely attached participants from single-parent households reported higher rates of cognitive reappraisal compared to those from two-parent households. Similarly, the ANOVA indicated that the interaction between attachment security and household type exerted a significant effect on CR. It is important to note that the household type by itself was not found to exert a significant effect on ER and that only in interaction with attachment style (secure versus insecure) was its effect significant. The significant interaction effect between attachment security and household type on cognitive reappraisal highlights the nuanced role of family structure in the development and use of emotion regulation strategies in children.

Furthermore, the results indicated that the effect of attachment security on CR was more pronounced in single-parent households compared to two-parent households. This is consistent with previous studies that have emphasized the role that single-parent households may play in the early attachment experiences of children and the emotion regulation strategies that consequently develop (Rawatlal et al., 2015; Tomşa, 2019; Uçar Çabuk et al., 2021).

As previously stated, there were no significant results found for ES as related to attachment security and family structure. This suggests that within this sample, ES was not strongly influenced by these variables. This could be explained by several things, such as the possibility that the theoretical conceptualisation of this study has limited applicability to the population, the role of interrelated factors that were not considered, or the psychometric limitations unique to this study. As previously mentioned, several studies have found mixed results concerning the association between attachment expressive suppression (Brockman et al., 2017; Elhousseini et al., 2022; Shenaar-Golan et al., 2021). Studies have also emphasized the importance of considering other factors influencing the presentation of ES, such as cultural norms and individual differences, rather than ES being exclusively determined by attachment security or household type (Kim et al., 2014; Caldwell & Shaver, 2012).

Studies emphasizing the importance of complex social dynamics related to family functioning challenge the notion that nuclear families are the optimal household type (Botha et al., 2018; Rabe & Naidoo, 2015). South African diversity is once again emphasized, with the presence of both collectivistic and individualistic communities, and a wide range of child-rearing practices (Seekings, 2008). For example, when considering communal child-rearing practices, it could fundamentally change the framework from which a child's early attachment experiences can be understood (Matshidze et al., 2018; Nsamenang, 2002).

Therefore, while this study provides evidence for the significance of family structure in moderating the relationship between attachment security and

emotion regulation, it also highlights the need to further understand the intricacies of why that is the case (Laher & Cockcroft, 2017). Family structure encompasses various elements, including the presence of multiple caregivers, socio-economic status, and cultural practices, all of which can influence attachment and emotion regulation. In the African context, the role of extended family and community support is particularly relevant, as it can provide additional resources and secure bases for children, thereby enhancing their emotional development (Tomlinson et al., 2010; Voges et al., 2019).

#### **5.4 Limitations**

The study's limited sample size presents a major limitation. The small sample size restricts the study's capacity to detect significant effects and reduces the robustness of the findings, impacting their generalizability. The study was conducted with a specific population of vulnerable children from the Hlatlaganya Drop-in-Centre, and while the findings serve to provide insight into a community comprising certain demographic characteristics, the results may not be representative of other populations or settings.

Furthermore, the use of psychometric measures, such as the Kinetic Family Drawing (KFD) and the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), may not fully capture the complexity of attachment functioning and emotion regulation in this cultural context. South Africa is a culturally diverse country, and the reliability and validity of these measures may differ depending on the setting. The inter-rater reliability of the KFD indicated substantial agreement; however, the inter-item reliability of the ERQ-CA, was still relatively low, posing a notable limitation. Language barriers also present a limitation. A pilot test demonstrated varying language proficiency in the sample, possibly influencing the participants' understanding of and responses to psychometric testing, thereby impacting data reliability and validity. While translators were trained and adequately prepared to assist with test administration, the use of translators introduces the possibility of biases and inaccuracies.

Another limitation is the narrow definition of family structure, limited to household type (single-parent vs. two-parent households). Family structure is multifaceted, including factors like extended family presence, relationship quality, and socio-economic context. Future studies should consider these additional factors for a more comprehensive understanding.

In summary, the limitations of this study, including the small sample size, limited generalizability, appropriateness of psychometric measures, and the narrow definition of family structure, should be considered when interpreting the findings. Future research should address these limitations by including larger and more diverse samples, using culturally appropriate measures, and employing a more comprehensive definition of family structure.

## **5.5 Future Directions**

Given the significant role of attachment security in promoting adaptive emotion regulation, interventions should focus on strengthening caregiver- child relationships and fostering secure attachment bonds. This can be achieved through programs that enhance caregiver sensitivity and responsiveness (Fonagy & Luyten, 2009; Mikulincer & Shaver, 2016). Additionally, the unique challenges faced by single-parent households should be taken into account, and targeted support should be provided to these families to enhance their capacity to support their children's emotional needs. This could include community-based support programs and resources aimed at improving the well-being of single parents and their children (Casale, 2015; Ma et al., 2022).

Furthermore, interventions should consider the cultural context and leverage communal child-rearing practices to provide additional support for children. Community-based programs that involve extended family members and community leaders can help create a supportive environment for children, promoting their emotional development and well-being. These programs can also provide education and resources to caregivers, helping them develop

effective emotion regulation strategies and fostering secure attachment relationships.

## **5.6 Conclusion**

This study has shown a significant relationship between attachment functioning and emotion regulation among vulnerable children in Mankweng, Limpopo. It also found that family structure, as represented by household type, has a moderating influence on this relationship. These findings were discussed in the context of existing literature, highlighting consistencies between studies. Of the two types of emotion regulation strategies tested, these findings were only applicable to cognitive reappraisal, and not to expressive suppression. The crosstabulation analysis revealed that securely attached children had higher cognitive reappraisal scores, and this effect was more pronounced in single-parent households. It was concluded that household type alone does not affect emotion regulation and that it is only when in interaction with attachment functioning (secure versus insecure) that it has an effect. The study's limitations and implications were critically evaluated, highlighting factors that need to be considered alongside the study's findings, and concluding with recommendations for potential research in the field.

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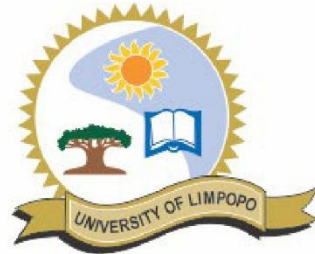
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## Appendices

### Appendix A: Ethical Clearance Certificate



University of Limpopo  
 Department of Research Administration and Development  
 Private Bag X1106, Sovenga, 0727, South Africa  
 Tel: (015) 268 3935, Fax: (015) 268 2306, Email: tukiso.sewapa@ul.ac.za

**TURFLOOP RESEARCH ETHICS COMMITTEE**  
**ETHICS CLEARANCE CERTIFICATE**

**MEETING:** 19 September 2024

**PROJECT NUMBER:** TREC/1598/2024: PG

**PROJECT:**

**Title:** The moderating role of family structure on the association between attachment functioning and emotional regulation in vulnerable South African children

**Researcher:** J Jansen van Vuuren

**Supervisor:** Prof M Makhubela

**Co-Supervisor/s:** Prof S Mashegoane  
Mr K Mashaba

**School:** Social Sciences

**Degree:** Master of Arts in Clinical Psychology

**PROF D MAPOSA**  
**CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE**

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

**Note:**

- i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
- ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
- iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

## Appendix B: Permission Letter



University of Limpopo,

Faculty of Humanities; School of Social Sciences; Psychology Department

Hlatlaganya Drop-In Centre

Nursing College

0727 Polokwane

Limpopo – South Africa

[Date]

Dear Sir/Madam,

My name is Jackie Jansen van Vuuren, I am a Master's student in Clinical Psychology at the University of Limpopo. I am seeking permission to conduct research at the Hlatlaganya Drop-in Centre on " The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa."

The study aims to explore the attachment dimensions between children and their caregivers, and how this impacts their emotions, behaviours, and cognition. I will collect data from 30-40 children, between the ages of 7 – 12, through drawings and questionnaires. Data collection is slotted to take a maximum of two weeks, with data collection taking place on the premises. The participants may be audio or video-recorded during this process.

Participants will be asked to give their written or verbal consent before the research begins. Their responses will be treated confidentially, and identities (their names and the name of the organisation) will be anonymous unless otherwise expressly indicated. Individual privacy will be maintained in all published and written data resulting from the study.

The research will be published on the University website, and participants can withdraw at any time without penalty. In case of distress, participants will be referred to the University's Psychology Clinic. No payment will be required. The data from the study will be stored electronically for 15 years, accessible only to the researcher and supervisor.

I therefore request permission in writing to conduct this research at your organisation.

Thank you for considering my request.

Sincerely,

Jackie Jansen van Vuuren

0827711921

202341935@keyaka.ul.ac.za

Supervisors

Prof S Mashegoane

Prof M Makhubela

Mr. K Mashaba

**Translated Permission Letter:**

University of Limpopo,

Faculty of Humanities; School of Social Sciences; Psychology Department

Hlatlaganya Drop-In Centre

Nursing College

0727 Polokwane

Limpopo – South Africa

Mohlomphegi/Mohumagadi yo a rategago,

Lebitso laka ke Lerato Masoga, ke moithuti wa Master's ka Clinical Psychology Univesithing ya Limpopo. Ke nyaka tumelelo ya go dira nyakišišo ka Hlatlaganya Drop-in Center ka ga " The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa."

Thuto ye e ikemišeditše go hlahloba dikarolo tša kgokagano magareng ga bana le bahlokamedi ba bona, le ka fao se se amago maikutlo a bona, maitshwaro, le temogo. Ke tla kgoboketša datha go tšwa go bana ba 30-40 ba mengwaga ya magareng ga 7 – 12, ka diswantšho, go anega dikanegelo, le dipotšišo. Kgoboketšo ya datha e rulagantšwe go tšea palomoka ya dibeke tše pedi, ka kgoboketšo ya datha yeo e diregago mo lefelong. Batšeakarolo ba ka gatišwa ka modumo goba ka bidio nakong ya tshepedišo ye.

Batšeakarolo ba tla kgopelwa go fa tumelelo ya bona ye e ngwadilwego goba ya molomo pele nyakišišo e thoma. Dikarabo tša bona di tla swarwa ka sephiri, gomme boitšhupo (maina a bona le leina la mokgatlo) di tla se tsebje ntle le ge go bontšhitšwe ka tsela ye nngwe ka go lebanya. Sephiri sa motho ka o tee ka o tee se tla hlokomelwa ka go datha ka moka ye e phatlaladitšwego le ye e ngwadilwego yeo e hlotšwego ke nyakišišo.

Dinyakišišo di tla phatlalatšwa wepsaeteng ya Yunibesithi, gomme batšwasehlabele ba ka gogela morago nako efe goba efe ntle le kotlo. Ge go ka ba le tlalele, batšwasehlabele ba tla romelwa go Kliniki ya Saekoloji ya Yunibesithi. Ga go nyakege tefo. Datha yeo e tšwago nyakišišong ye e tla bolokwa ka mokgwa wa elektroniki mengwaga ye 15, yeo e fihlelelwago fela ke monyakišiši le mookamedi.

Ka fao ke kgopela tumelelo ka go ngwala go dira nyakišišo ye mokgatlong wa lena.

Ke leboga ge le ela hloko kgopelo ya ka.

Ka kgonthe,

Jackie Jansen van Vuuren

0827711921

202341935@keyaka.ul.ac.za

## Supervisors

Prof M Makhubela

Prof S Mashegoane

Mr. K Mashaba

## Appendix C: Participants' Invitation Letter and Information Sheet



### INFORMATION FOR PARTICIPANTS

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**PROJECT TITLE: The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.**

1. You are invited to participate in the following research project:  
**“The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.”**
2. Participation in the project is completely voluntary and you are free to withdraw from it at any time, without providing any reasons.
3. It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.
4. You are encouraged to ask any questions that you might have in connection with this project at any stage. The researchers will gladly answer your question(s).
5. There are no known consequences of completing a questionnaire about attachment and emotion regulation. However, some individuals may react apprehensively; being sensitive to completing a questionnaire about situations

that were not particularly comfortable for them. If this happens, you will be referred for debriefing at the Psychology Clinic (University of Limpopo) at no cost to you.

6. Should you at any stage feel unhappy, uncomfortable, or concerned about the research, please **contact the clinician: Ms J. Jansen van Vuuren, at Cell: 082 771 1921 or their supervisor (Prof M Makhubela, at Tel.: 015 268 3505).**

## Translated Participants' Invitation Letter and Information Sheet:



### TSHEDIMOŠO YA BATLHAHLOBO

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#### **SEHLOPHA SA PROJEKE: The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.**

1. O laletšwa go tšea karolo mo protšekeng ye e latelago ya nyakišišo:  
**“The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.”**
2. Go tšea karolo mo protšekeng ke ga boithaopo ka botlalo gomme o lokologile go ikogela morago go yona nako efe goba efe, ntle le go fa mabaka afe goba afe.
3. Go a kgonega gore wena ka noši o ka no se itemogele mehola le ge e le efe nakong ya modiro, gaešita le ge tsebo yeo e ka kgoboketšwago ka modiro e ka ipontšha e le e holago go ba bangwe.
4. O hlohletšwa go botšiša dipotšišo dife goba dife tšeo o ka bago le tšona mabapi le projeke ye mogatong ofe goba ofe. Banyakišiši ba tla araba potšišo (dipotšišo) tša gago ka Lethabo.

5. Ge go tšea karolo nyakišišong go ka hlohleletša tlalelo ya maikutlo, o tla romelwa go ya go botšološišwa ka Kliniki ya Saekoloji (Yunibesithi ya Limpopo) ntle le ditshenyagalelo go wena.
6. Ge mogatong ofe goba ofe o ka ikwa o sa thaba, o sa phuthologa, goba o tshwenyegile ka nyakišišo, hle ikopanye le monyakišiši: **Ms J. Jansen van Vuuren, at Cell: 082 771 1921 or their supervisor (Prof M Makhubela, at Tel.: 015 268 3505).**

**Appendix D: Assent Form:**

**PROJECT TITLE:** The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.

**CLINICIAN'S NAME(S):** Jackie Jansen van Vuuren.

**CLINICIAN'S CONTACT NUMBER:** 0827711921.

**Why do you want to talk to me?**

We want to tell you about a research study we are doing. A research study is a way to learn more about something. We would like to find out more about how you feel and think. You are being asked to join the study because the information learned from this study could improve the way we understand children and how we can help them in the future.

**If I join the study, what will I be asked to do?**

If you choose to join the study you will be asked to draw pictures of your family, tell us stories, or tell us what you see on pictures that we show you and also answer some questions that we have for you.

### **Will any part of the study hurt?**

No, the project will not hurt. The questions and activities can take a long time, but you can take a break if you are feeling tired or if you don't want to answer all the questions at one time. Also, if you do not like the activities or they make you feel bad you can let us know so that we can help you feel better.

### **Do I have to join the study?**

You do not have to join this study. It is up to you. You can say okay now and change your mind later. All you have to do is tell us you want to stop. No one will be mad at you if you don't want to be in the study or if you join the study and change your mind later and stop. We are talking to your parents/guardians about the study, and you should talk to them about it too.

### **What if I have questions?**

Before you say yes or no to being in this study, we will answer any questions you have. If you join the study, you can ask questions at any time. Just tell the researcher that you have a question.

If you have any questions about this study please feel free to ask (.....)

I,.....(name of participant) have been told that my parents have said it is okay for me to participate, if I want to, in a project about  
 ..... I know that I can stop at any time I want to and it will be okay if I want to.

.....

Participant Name

Signature

Date

**Assent (for the study team to complete):**

I have discussed this research study with ..... using language that is understandable and appropriate for the participant. I believe that I have fully informed him/her of the nature of the study and its possible risks and benefits. I believe the participant understood this explanation and assent to participate in this study.

.....

.....

Researcher

Signature

Date

**Translated Assent Form:****FOROMO YA TUMELELO (BAKENG SA BANA)**

**SEHLOPHA SA PROJEKE:** The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.

**LEINA LA MONYAKIŠIŠI:** Jackie Jansen van Vuuren.

**NOMORO YA KGOKAGANO YA MONYAKIŠIŠI:** 0827711921

**Ke ka baka la'ng o nyaka go bolela le nna?**

Re nyaka go le botša ka nyakišišo ya nyakišišo yeo re e dirago. Thuto ya nyakišišo ke tsela ya go ithuta ka botlalo ka selo se itšego. Re rata go hwetša dintlha ka botlalo mabapi le kamoo o ikwago ka gona le kamoo o naganago ka gona. O kgopelwa go tsenela nyakišišo ye ka gobane tshedimošo yeo e ithutilwego nyakišišong ye e ka kaonefatša tsela yeo re kwešišago bana ka yona le kamoo re ka ba thušago ka gona nakong e tlogo.

**Ge nka tsenela mošomo wo, ke tla kgopelwa go dira eng?**

Ge o kgetha go tsenela projeke o tla kgopelwa go thala diswantšho tša lapa la gago, o re anege dikanegelo goba o re botše seo o se bonago diswantšhong tšeo re go bontšhago tšona gomme gape o arabe dipotšišo tše dingwe tšeo re go nago le tšona.

### **Na karolo le ge e le efe ya modiro e tla kweša bohloko?**

Aowa, projeke yeo e ka se gobatše. Dipotšišo le mediro di ka tšea nako e telele, eupša o ka khutša ge e ba o ikwa o lapile goba ge e ba o sa nyake go araba dipotšišo ka moka ka nako e tee. Gape, ge o sa rate mediro yeo goba e go dira gore o ikwe gampe o ka re tsebiša gore re kgone go go thuša go ikwa o le kaone.

### **Na ke swanetše go tsenela modiro wo?**

Ga go nyakege gore o tsenele projeke ye. Go ithekgile ka wena. O ka re go lokile bjale gomme wa fetotšha kgopolo ya gago ka morago. Seo o swanetšego go se dira ke go re botša gore o nyaka go kgaotša. Ga go na motho yo a tlogo go go galefela ge o sa nyake go ba ka gare ga projeke goba ge o tsenela projeke yeo gomme wa fetotšha kgopolo ya gago ka morago gomme wa kgaotša. Re boledišana le batswadi/bahlokamedi ba gago ka projeke ye, gomme le wena o swanetše go bolela le bona ka yona.

### **Ke dira eng ge ke na le dipotšišo?**

Pele o re ee goba aowa go ba mo protšekeng ye, re tla araba dipotšišo le ge e le dife tšeo o nago le tšona. Ge e ba o tsenela modiro wo, o ka botšiša dipotšišo nako le ge e le efe. E no botša monyakišiši gore o na le potšišo.

Nna,.....(leina la motšeakarolo) ke boditšwe gore batswadi ba ka ba rile go lokile go nna go tšea karolo, ge ke nyaka, mo porojekeng ye e lego mabapi le ge ke nyaka.

.....

Leina la Motšearolo

.....

Letšatšikgwe

.....

Mosaeno

**Tumelelo (go tlatšwa ke monyakišiši):**

Ke ahlaahlile projoke ye ya nyakišišo le ..... go šomiša polelo yeo e kwešišegago le yeo e swanetšego motšearolo. Ke dumela gore ke mo tsebišitše ka botlalo ka ga mohuta wa nyakišišo le dikotsi le mehola ya yona yeo e ka bago gona. Ke dumela gore motšearolo o kwešišitše thalošo ye le tumelelo ya go tšea karolo nyakišišong ye.

.....

Monyakišiši

.....

Letšatšikgwe

.....

Mosaeno

## Appendix E: Consent Form



### CONSENT FORM

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**PROJECT TITLE:** The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.

I, \_\_\_\_\_ hereby consent to my child's participation in the following project:

**“The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.”**

I realise that:

1. This study deals with attachment and emotion regulation in young South African children using the Kinetic Family Drawing and the Emotion Regulation Questionnaire.
2. The research project, that is, the extent, aims, and methods of the research, has been explained to me.

3. The Turfloop Research and Ethics Committee at the University of Limpopo has approved that my child may be approached to participate in the study.
4. The project sets out the risks that can be reasonably expected as well as possible discomfort that my child may experience while participating in the research study, an explanation of the anticipated advantages for my child or others that are reasonably expected from the research, and alternative procedures that may be to my advantage.
5. I will be informed of any new information that may become available during the research that may influence my willingness to allow my child to continue their participation in the study.
6. Access to the records that pertain to my child's participation in the study will be restricted to persons directly involved in the research.
7. Any questions that I may have regarding the research or related matters, will be answered by the researchers.
8. If I have any questions about or problems regarding the study or experience any undesirable effects, I may contact the researcher (Ms J. Jansen van Vuuren, at Cell: 082 771 1921) or their supervisor (Prof M Makhubela, at Tel.: 015 268 3505).
9. My child's participation in this research is voluntary and I can withdraw their participation at any stage without any consequences.
10. The raw data will be securely stored at the Department of Psychology (UL) for a minimum period of 15 years for archiving and reuse. During this period the raw data might also be used for further research by other researchers.
11. I indemnify the University of Limpopo and all persons involved with the above project, from any liability that may arise from my child's participation in the

project, or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

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SIGNATURE OF PARENT/GUARDIAN

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SIGNATURE OF THE PERSON THAT INFORMED  
THE RESEARCHED PERSON

Signed at \_\_\_\_\_ this \_\_\_\_ day of \_\_\_\_\_ 2024

**Translated Consent Form:****FOROMO YA TUMELELO**

**SEHLOPHA SA PROJEKE:** The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.

Nna, ..... ka mo ke dumela go tšea karolo ga ngwana wa ka mo protšekeng ye e latelago:

**“The Moderating Role of Family Structure on the Association between Attachment Functioning and Emotion Regulation among Vulnerable Children in South Africa.”**

Ke lemon gore:

1. Thuto e lebane le go šoma ga kgokagano le go itšhireletša go bana ba bafsa ba Afrika Borwa ka go šomiša seswantšho sa lapa sa kinetic le thuto ya teko ya temogo ya bana.
2. Protšeke ya nyakišišo, ke gore bogolo, maikemišetšo le mekgwa ya nyakišišo, e hlalošitšwe go nna.

3. Komiti ya Dinyakišišo le Boitshwaro bja Turfloop Yunibesithing ya Limpopo e dumeletše gore ngwana wa ka a ka batamelwa gore a tšee karolo nyakišišong ye.
4. Protšeke e hlagiša dikotsi tšeo di ka letelwago ka mo go kwagalago, gammogo le go se iketle mo go ka bago gona mo ngwana wa ka a ka bago le gona ge a tšea karolo nyakišišong. E hlalosa gape mehola yeo e letetšwego bakeng sa ngwana wa-ka goba ba bangwe yeo e letetšwego ka mo go kwagalago go tšwa nyakišišong le ditshepedišong tše dingwe tšeo di ka nkholago.
5. Ke tla tsebišwa ka tshedimošo efe goba efe ye mpsha yeo e ka bago gona nakong ya nyakišišo yeo e ka tutuetšago go ikemišetša ga ka go dumelela ngwana wa ka go tšwetša pele go tšea karolo ga ka.
6. Phihlelelo ya direkhoto tšeo di lebanego le go tšea karolo ga ngwana wa ka nyakišišong e tla lekanyeletšwa go batho bao ba amegago thwii nyakišišong.
7. Dipotšišo dife goba dife tšeo nka bago le tšona mabapi le nyakišišo goba ditaba tše di amanago le yona, di tla arabja ke banyakišiši.
8. Ge ke na le dipotšišo mabapi le goba mathata mabapi le nyakišišo ye, goba ke itemogela ditlamorago tše di sa rategego, nka ikgokaganya le monyakišiši (Ms J. Jansen van Vuuren, at Cell: 082 771 1921) or their supervisor (Prof M Makhubela, at Tel.: 015 268 3505).

9. Go tšea karolo ga ngwana wa ka nyakišišong ye ke ga boithaopo gomme nka gogela morago go tšea ga gagwe karolo mo kgatong efe goba efe ntle le ditlamorago.
10. Datha ye tala e tla bolokwa ka polokego ka Kgorong ya Saekoloji (UL) lebaka la bonnyane bja mengwaga ye 15 bakeng sa go boloka le go šomišwa gape. Nakong ye datha ye tala e ka šomišwa gape go nyakišišo ye nngwe ke banyakišiši ba bangwe.
11. Ke hlokomela Yunibesithi ya Limpopo le batho ka moka bao ba amegago ka protšeke ye e lego ka mo godimo, go tšwa go maikarabelo afe goba afe ao a ka tšwelelago go tšwa go go tšea karolo ga ngwana wa ka mo protšekeng, goba yeo e ka bago e amana le yona, ka mabaka afe goba afe, go akaretšwa le go se šetše ka lehlakoreng la . batho bao go boletšwego ka bona.

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MOSAENO WA MOTSWADI/MOHLOKOMEDI

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MOSAENO WA MOTHO YO A TSEBIŠITŠEGO

MOTHO YO A NYAKIŠITŠWEGO

E saennwe ka \_\_\_\_\_ letšatši le la \_\_\_\_ la \_\_\_\_\_ 2024

## Appendix E: Demographics Questionnaire

### Demographics Questionnaire:

*Please complete the following questions about your child and your household. This information will help us better understand the background and context of the participants in this study.*

#### 1. Child's Information:

##### 1.1 Date of Birth:

(DD/MM/YYYY) \_\_\_\_\_

##### 1.2 Sex:

- Male       Female

##### 1.3 Current Grade:

- Grade 1    Grade 2    Grade 3    Grade 4    Grade 5    Grade 6

#### 2. School Information:

2.1 Current School Name: \_\_\_\_\_

2.2 School Quintile: (This refers to how the school is classified based on its financial resources and the socio-economic background of the students).

*Schools are ranked from 1 to 5, where:*

- 1 means the school is in a very low socio-economic area with fewer resources.
- 2 means the school is in a low socio-economic area with limited resources.
- 3 means the school is in a middle socio-economic area with moderate resources.
- 4 means the school is in a high socio-economic area with good resources.
- 5 means the school is in a very high socio-economic area with the best resources.

*Please select the number that best represents the school your child attends.*

- Quintile 1
- Quintile 2
- Quintile 3
- Quintile 4
- Quintile 5

2.3 Class Size: (Please estimate the number of learners in your child's class)

- Less than 20
- 21-30
- 31-40
- More than 40

3. Ethnic and Cultural Background:

3.1 Ethnic Group:

- Black/African
- White
- Coloured
- Indian/Asian
- Other (please specify): \_\_\_\_\_

4. Language Information:

4.1 Home Language: (Please specify the language most frequently spoken at home)

- \_\_\_\_\_

4.2 Additional Languages Spoken at Home: (Please list any other languages spoken in the household)

- \_\_\_\_\_

5. Household Employment:

5.1 Number of Persons in Household Employed:

- None
- 1 person
- 2 persons
- 3 persons
- 4 or more persons

7. Family Structure:

7.1 Type of Family Household:

- Single-Parent Household
- Two-Parent Household

## Translated Demographic Questionnaire:

Fomong ya Boemo ba Bahlahlobi

Ke kopa o phethe diphetho tse di latelang ka ngwana wa gago le ntlo ya gago.

Tshedimosetso eno e tla re thuša go utulla botho le maemo a baeti mo patlisisong e.

### 1. Tshedimosetso ka ngwana:

#### 1.1 Letsatsi la Borai:

(DD/MM/YYYY) \_\_\_\_\_

#### 1.2 Phetho:

- Monna
- Mosadi

#### 1.3 Sehlopha se se Kgethegileng:

- Sehlopha sa 1
- Sehlopha sa 2
- Sehlopha sa 3
- Sehlopha sa 4
- Sehlopha sa 5
- Sehlopha sa 6

### 2. Tshedimosetso ka Sekolo:

2.1 Lebitso la Sekolo sa Nako e: \_\_\_\_\_

2.2 Quintile ya Sekolo: (E amanang le tsela e sekolo se kgethegileng ka go amanang le mekgwa ya ditlhopho le mekgwa ya ditlhopho ya baithuti).

Sekolo se kgethegile ka go amanang le 1 go ya go 5, go amanang le:

- 1 go bolela gore sekolo se mo lefelong la socio-economic le le tlase ka go na le mekgwa e e fokotsegileng.
- 2 go bolela gore sekolo se mo lefelong la socio-economic le le tlase ka go na le mekgwa e e lekanyeditsweng.
- 3 go bolela gore sekolo se mo lefelong la socio-economic le le maamong a a magareng ka mekgwa e e amanang le mekgwa a a amanang.
- 4 go bolela gore sekolo se mo lefelong la socio-economic le le godimo ka mekgwa e e molemo.
- 5 go bolela gore sekolo se mo lefelong la socio-economic le le godimo ka

mekgwa e e kgethegileng ka go fetisisa.

Ke kopa o kgethe nomoro e e amanang le sekolo se ngwana wa gago a kgethegileng go tsenya.

- Quintile 1
- Quintile 2
- Quintile 3
- Quintile 4
- Quintile 5

2.3 Boholo ba Sehlopha: (Ke kopa o ake palo ya baithuti mo sehlopheng sa ngwana wa gago)

- Go feta 20
- 21-30
- 31-40
- Go feta 40

### 3. Botlhale le Mmele:

3.1 Melemo ya Ethnic:

- Moafrika/Black
- Setlhogo/White
- Koloured
- Indian/Asian
- Tse dingwe (ke kopa o tthalose): \_\_\_\_\_

### 4. Tshedimosetso ka Puo:

4.1 Puo ya Leago: (Ke kopa o tthalose puo e amanang le borai mo lapeng)

- \_\_\_\_\_

4.2 Dipuo Tse dingwe Tse di Amanang le Leago: (Ke kopa o ngwaga di puo dingwe tse di amanang mo lapeng)

- \_\_\_\_\_

### 5. Go Hirediwa mo Lapeng:

5.1 Palo ya Batho mo Lapeng ba ba Hirediwang:

- Go se na

- 1 motho
- 2 batho
- 3 batho
- 4 kgotsa go feta batho

6. Kgorong ya Lelapa:

7.1 Melemo ya Lelapa:

- Lelapa la Moeng ka Ngwaga
- Lelapa la Babedi