UNIVERSITY OF SOUTHAMPTON

Faculty of Environmental and Life Sciences

Psychology

Psychosocial Functioning in Alternative Care in Saudi Arabia: The Role of Attachment in Middle Childhood

by

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Thesis for the degree of Doctor of Philosophy

May 2021

University of Southampton

Abstract

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Children in alternative care who live away from their biological parents are at great risk of experiencing developmental difficulties and attachment insecurity. This project studied the effects of care type and attachment relationship on psychosocial development in three groups of children in Saudi Arabia: abandoned children living in institutional care; children living with non-biological parents; and those living with their biological parents aged 8-12 years. Chapter 1 describes the nature of alternative care with a focus on institutional and adoption care settings, and provides a cultural context to understand the nature of these groups. Chapter 2 outlines attachment theory as a framework and covers previous research outcomes regarding emotional and behavioural symptoms, sociality, self-perception, cognitive function and attachment relationship. Chapter 3 provides a description of institutional care for abandoned children in terms of care policy and structure, programmes and services, as well as the behaviour of caregivers and opportunities for staff training. Chapter 4 considers the validity of the translation and adaptation of two scales measuring loneliness, social dissatisfaction, and self-perception for the subsequent chapters. Chapter 5 looks at psychosocial development and cognitive function in alternative care, and finds more psychosocial problems and poor cognitive functioning in institutionalised children. Chapter 6 looks at attachment concepts in the three groups, showing a higher prevalence of the secure pattern in children living at home, compared to institutional residents. Chapter 7 collates data from Chapters 5 and 6 to determine whether a relationship between care type and attachment insecurity contributes to psychosocial challenges. The results revealed no significant interaction, but attachment insecurity was the most influential predictor of psychosocial difficulties across the sample. Chapter 8 summarises the key findings of the thesis, and compares them with previous research that has utilised attachment theory to understand developmental outcomes in children who live in different care settings. It further discusses how the findings can inform future research, and the development of prevention and intervention programmes, in terms of theory and practice, for children in Saudi Arabia who live in institutional care.

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Research Thesis: Declaration of Authorship

Print name: Mohammed Aldoreeb

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I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

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2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
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Acknowledgements

I would like to express my sincere appreciation to my supervisors Dr Julie Hadwin and Dr Jana Kreppner for the support and encouragement I have received.

I acknowledge my University King Faisal University for the scholarship to fund my PhD.

I would like to thank all children, parents, teachers, institutional staff, psychologists, social workers, and counsellors for helping me to complete my work.

I wish to acknowledge the support and great love of my parents, my wife, my children, siblings and my entire family. They kept me going on and this work would not have been possible without their input.

I cannot forget to thank my friends for all their support in this very intense period of time.

I hope the immense amount of insights that I have learnt during my long journey will be transmitted through my career and future academic projects.

Definitions and Abbreviations

BAI-Y ..... Beck anxiety inventory for youth

BDI-Y ..... Beck depression inventory for youth

CC ..... Cuddled children who live with non-biological parents

CRI ..... Children reared in institutional care

FFI ..... Friends and family interview

GSW ..... Global self-worth subscale of Self-perception Profile

HBI ..... Home-based institutions

IWM ..... Internal Working Model

LSDS ..... Loneliness and social dissatisfaction scale

MHRSD ..... Ministry of Human Resources and Social Development

RF ..... Reflective function

SC ..... social competence subscale of Self-perception Profile

SDQ ..... Strength and difficulties questionnaire

SPP ..... Self-profile Perception

TD ..... Children typically developed

UNICEF ..... United Nations International Children's Emergency Fund

WBI ..... Ward-based institutions

WHO ..... World Health Organisation

WISC-IV ..... Wechsler Intelligence Scale for Children fourth edition

1 Chapter One: Alternative Care: Background and Overview

1.1 Introduction

Childhood is a phase that involves substantial developmental changes, particularly in relation to psychosocial functioning. Healthy development within this phase reflects psychological and emotional well-being and the ability to engage in relationships with others and contend with social tasks (Knight & Baune, 2017; Preedy & Watson, 2010). Development is a remarkably complex process, reflecting the emergence of new behaviours, as well as changes in behavioural organisation. Children are highly dependent on carers in the first years of life, and this period is linked to key aspects of development, including the nature of the attachment relationship with caregivers (Dozier & Rutter, 2016). Successful attachments are seen as critical to positive developmental outcomes. While it is important for children to be with their primary carers, some children grow up away from their biological parents. These exceptional circumstances can have a significant impact on development.

A substantial number of children are placed in alternative care. While some sources indicate that 2.5 million children and adolescents between birth and 17 years of age are estimated to live in institutions globally (Petrowski et al., 2017), the United Nations International Children's Emergency Fund (UNICEF) argues that this number is, in fact, much higher (Kostyak, 2017). Children typically come into care as a result of experiencing potentially traumatising events, such as a parent's death, neglect, abuse, or a family breakdown (Dacanay et al., 2006; Krohn, 2015). In some cases, children taken into care have significant behavioural problems (Ainsworth & Thoburn, 2013). In addition, children in care may have experienced abandonment through being handed over to an institution or left on the street (Fuchs et al., 2015).

Different forms of alternative care have been created to best meet children's needs, including institutional care settings, or adoptive or foster caregiving environments (United Nations, 2009). Although these contexts can provide diverse experiences for children growing up, alternative care settings are recognised as presenting challenges that may negatively affect a child's

development, and which can be linked to negative early experiences (UNICEF, 2017).

1.2 Alternative Care: Definition and Terminology

'Alternative care' is defined as the formal or informal placement of children who, for whatever reason, cannot live with their biological parents (United Nations, 1989). Placements may be with extended family, friends or relatives, in an institution, or with foster caregivers (Dacanay et al., 2006; Wenke, 2015). Typically, the reason for placing a child in alternative care is to provide them with a responsive and sensitive care situation that is lacking at home. Accordingly, alternative care decisions that lead to a family's separation are often considered to be in the child's best interests (United Nations, 1989).

Theoretically, alternative care settings aim to provide an appropriate level of care for children when their biological parent/s cannot. However, the settings can differ as a result of the level of provision, including programmes and interventions to support development. In addition, the length of time that children stay in alternative care affects their placement. For example, some alternative care facilities provide full-time, long-term caregiving, while others offer temporary, short-term, or part-time caregiving (Andrews & Kaufman, 1999; Roeber et al., 2012; Zeanah et al., 2010).

Existing research identifies two main types of alternative care settings for groups of children: institutional care, or residential services and family-like care (Petrowski et al., 2017; United Nations, 2009).

1.2.1 Institutional care

Institutional care facilities house groups of children who are cared for by remunerated caregivers. Despite the term 'institution' being widely applicable, it can be used differently depending on the region or culture. Ainsworth and Thoburn (2013) argued that it is important to understand how language and terminology can affect institutional policies and analysis. For instance, the terms 'institution' and 'children's home' are sometimes used synonymously in English, but can refer to different care types. In Armenia, however, it is hard to differentiate between the two (Ainsworth & Thoburn, 2013). Some cultures use other terms, such as 'hospital' and 'orphanage' to refer to the experience of institutional care (The European Expert Group [EEG], 2015). Therefore, it is

important to understand the potential variation in what these terms refer to when researching care policies across cultures (UNICEF, 2017).

Institutional care typically aims to provide a length of care that meets the child's best interests. This care can be run and supervised publicly by the government, or privately by faith organisations, philanthropic organisations or individuals (Ainsworth & Thoburn, 2013). Consequently, different institutional settings can lead to different developmental outcomes depending on the nature and purpose of the care. What is consistent, however, is that the research typically recommends non-institutional care (i.e., family-based) as the best alternative care environment (United Nations, 2009).

1.2.2 Family-like care

Family-like care relies upon and aims to simulate a traditional family model to meet children's needs (Petrowski et al., 2017). Adoption and foster care are the most common examples of family-like, alternative care. Adoption is the lifelong placement of abandoned and/or orphaned children into a new family (Juffer & van IJzendoorn, 2007); thereby, the adoptive family is treated as the birth family in the eyes of the law, and adoptive parents have the same roles and obligations as biological parents.

Adoption is an intervention with a long history (Adoption History Project, 2012). In recent years, several motivations for adoptive families have been identified. For instance, a large study of over 2,000 adoptive families found the three key motivations for adoption to be: providing a permanent residency for the child; expanding a family; and infertility (Malm & Welti, 2010).

Over 250,000 children are adopted globally every year; the United States, China and Russia are the top three adoptive countries (United Nations, 2009). Over 80% of children are domestically adopted (where the adoptee and adoptive parent are from the same country) (Juffer & van IJzendoorn, 2005); the remainder are international adoptions (where the adoptee and adoptive parent are from different countries). More than 60% of adoptees — the majority of whom are girls — were under the age of five when adopted (Dacanay et al., 2006; Dozier et al., 2012; National Religion King, 2006; The St. Petersburg-USA Orphanage Research Team, 2008; United Nations, 2009); this could reflect adoptive families' preference to adopt younger girls.

Whilst adoption exists in most cultures, its procedures and policies differ from one country to another. The Department of Economic and Social Affairs at the United Nations (2009) highlighted some of these differences. One major distinction is that certain countries mandate that the adoptive parents be a couple, whilst others authorise adoption for single persons; the latter represents the policy of the vast majority of countries (Jurviste et al., 2016). According to the UN report (2009), most countries allow both domestic and international adoption, whereas a few allow only domestic adoption. In addition, the minimum or maximum age of the parents at adoption varies by country: in France, for example, the minimum age is 28, while in Estonia, adoptive parents are aged between 35-50 years old (Jurviste et al., 2016).

Another type of family-like alternative care is foster care. According to the American Psychological Association (APA), foster care is defined as a temporary placement during which a family or adult provides care for an unrelated child who cannot stay with their biological family, for reasons such as illness or abuse (APA, 2015). Foster care is intended to last until the child can return home, is adopted, or reaches adulthood (James, 2016; National King, 2006). Foster care also provides an alternative care environment for children who have failed to thrive in adoptive families (Morgan, 2014). The difference between adoption and foster care stems from two key factors: the legal relationship between caregiver and child, and duration of residency. In adoption, which is permanent, all official family responsibilities are transferred to the adoptive family. Conversely, foster carers do not have the same responsibilities as birth or adoptive parents, such as making medical decisions for the child (Craft, 2019), because foster care is a transitional phase.

1.3 Alternative Care in Saudi Arabia

Saudi Arabia has an alternative care system for vulnerable children who have been maltreated or abandoned. When children are unable to stay with their biological parents, which is usually due to the parent/s having died, been abusive, or deemed unfit carers, the government places them into care. The Saudi alternative care system is drawn from *Sharia* — or Islamic — law. Consequently, in order to understand Saudi alternative care procedures and regulations, some factors of Islamic law must be considered. In Islamic law, a child who loses their parents (especially their father) prior to puberty is

considered an 'orphan' (Esteti, 2007). Abandoned children are also considered orphans if they have lost contact permanently with their parents.

In Saudi Arabia, most children in alternative care are either sheltered in residential services or supervised by the Ministry of Human Resources and Social Development (MHRSD). According to MHRSD's annual report (2016), different types of childcare settings for infants include institutions, 'cuddling families' (defined below), and foster families. Alternative care can also include temporary care for children whose mothers are in prison. In 2015, over 49,000 children and adolescents from 0 to 15 years of age were reported to be in alternative care; this includes all types of alternative care (e.g., living with family, and institutional care for juveniles). It is speculated that this figure would be higher if non-reported orphans (who live informally in kinship with relatives) were officially recorded.

The two most common forms of alternative care in Saudi Arabia are institutional care (orphanages) and adoptive care (known as cuddling care) (MHRSD, 2016).

1.3.1 Institutional care in Saudi Arabia

Institutional care is provided to different groups of vulnerable children, including abandoned children. There is no accurate statistic for the number of abandoned children residing in institutions in Saudi Arabia. It is certain, however, that they represent a small number of alternative care residents, and this reflects the Saudi government's new policy, following UNICEF recommendations (United Nations, 2010), to deinstitutionalise children and place them into more individualised and smaller group care settings. Abandoned infants are therefore placed into adoption (*cuddling*) as quickly as possible. Moreover, new programmes have been launched to place children currently residing in an institution into family-like care environments.

Some institutions implement foster family solutions, placing a small number of children with 'primary stable caregivers' in an apartment within an institution. Other institutions implement larger group placements. All caregiving institutions provide psychosocial services for children, such as counsellors and psychologists (Al Attas, 2013). Saudi institutions also offer social and recreational activities outside of the institution, with the aim of helping children engage and integrate with society (MHRSD, 2016). However,

in order to have a better understanding of the range of institutional care offered in Saudi Arabia, it is important to identify the core aspects of different types, including their policies, programmes, services, and caregiving methods.

1.3.2 Adoptive care in Saudi Arabia

Al-tabanni is the Arabic term used to refer to the process of adoption, similar to that of Western societies, that existed in the pre-Islamic era (Kutty, 2015). This became prohibited after the establishment of Islam, as evidenced by the story of Prophet Muhammed (Peace be upon him) adopting a son. Following the revelation of the Qur'an that forbade adoption, the prophet announced that the child was no longer his son. The aspect of adoption that was forbidden was that of a person taking a non-biological child and calling it his own.

"*Call them (adopted sons) by (the names of) their fathers*"

(Qur'an, Taqī Al-Dīn Hilālī & Khan, 1984, p. 719).

Islamic *Sharia* thus does not consider adoption to be grounds for inheritance, for it sees the known and established lineage of the child as something that can neither be rescinded nor eliminated.

However, *Sharia* law offers an alternative to adoption. *Kafala* is the Arabic term that refers to the process a family goes through before and after taking a child into their home (Al Sadhan, 2000). In Islam, *Kafala* refers to a process of legal fostering, whereby the parents consider the child as their own, under the restrictions mentioned earlier. *Kafala* has similarities and differences with the United Nation's (2009) definition of adoption. For instance, *kafala* and adoption are similar in that they both involve non-biological parents permanently taking care of and raising a child as their own. *Kafala* gives parents the same legal responsibilities as birth parents, yet a child under the *kafala* system cannot take the adoptive caregiver's surname; meaning the child is not considered as a birth child. *Kafala* is also a wider term, as it may include sponsoring an orphan only financially.

In Saudi Arabia, a family that provides adoptive care, or *Kafala*, is known as the 'cuddling family', named for their role of embracing the child; it describes how a family cuddles the child by meeting their needs and

protecting them from harm. ‘Cuddling’ can be arranged formally through the MHRSD, whose procedures require that the family have two parents — or at least a mother — under 50 years of age. In addition, a social worker must provide a report establishing that the family is capable of the role, and the cuddling family then undertakes a series of tasks and procedures, such as being interviewed by the ministry, passing criminal background checks, and proving that they are mentally and financially capable. If the application is approved, the mother is invited to meet the child at their current institution. In some cases, cuddling families host the child for a few weeks to see if they want to continue caring for the child.

A cuddling family can opt to care for the child either full- or part-time. Those looked after part-time often stay with their cuddling family on weekends and at the end of Ramadan, for instance, and are also present to attend family events. These children’s permanent home is still considered to be the institution where they spend most of their time, and they are usually older than 4 years old. According to the Saudi Statistical Authority’s (2017) annual report, over 400,000 children live with non-biological parents in Saudi Arabia, the vast majority with other relatives (e.g., grandparents, siblings). Over 8,000 children are reported as being formally cuddled from institutions under the supervision of the MHRSD. Either one or both parents of all cuddled children are unknown, and the children are cuddled for varying reasons, including religious motivations and infertility.

Recently, the MHRSD launched a programme that allows private agencies to place children in cuddling families (MHRSD, 2017). All abandoned children under the age of two are placed with an agency until a cuddling family becomes available. These agencies provide foster care while the child is waiting or being processed for a cuddling placement. Besides the cuddling conditions stated earlier, under the new regulations, the priority to cuddle a child is given to families with infertility problems, as well as those who have no more than three children under the age of six. In addition, parents and child must have the same skin colour.

Only children born in Saudi Arabia can be cuddled, which reflects the Saudi preference for domestic adoption. Infants are cuddled in their first two years of age, mostly in their first year, to allow breastfeeding by the cuddling mother, or any female relative. This factor is crucial as, in Islamic law, when a

non-biological child reaches puberty, they are considered a stranger to the adoptive family, unless they had been breastfed with them during their first two years. It is noteworthy here to state that, compared to other countries, cuddling or adoption policies and regulations are still new in Saudi Arabia, which means that researchers and policy makers are still determining the best practices and policies for implementing the care of orphaned children. For instance, certain concepts, such as whether or not the biological mother has the right to have her child back if she so desires, remain unclear.

The developmental outcomes for cuddled children in Saudi Arabia have not been well-documented; this could be for several reasons. For instance, it was common for cuddled children to be anonymous throughout the 20th century (Palacios & Brodzinsky, 2005), with cuddling families tending to hide the truth from the public. Al-Somali (2016) identified anonymity, which means the child's real identity being anonymous, as a challenge that a cuddling family in Saudi Arabia might experience. Moreover, openness, which relates to how and when to tell the child they are not biologically related, could cause stress to all members of the family, including the child. Both anonymity and openness can cause a difficulty to have contact with this population for research purposes since both are common in this group of population. Another challenge identified by Al-Somali was families' struggle to obtain a cuddled child's official documents, since the procedures for procurement differ for each child due to one or both of their parents being unknown.

1.4 Background of the Research Problem

1.4.1 Abandonment: Background and motives

Generally, a child is deemed abandoned if they are deliberately and permanently deserted by a parent or legal guardian (Therivel & McLuckey, 2017), but the concept of abandonment is vague and has been under debate for some time (Panter-Brick & Smith, 2000). Abandonment is a worldwide phenomenon, and its ambiguity hails from the processes and motives that exist across different cultures. For example, abandoned children are considered 'social orphans' in cultures where the birth parents are mostly unknown and/or unavailable, but likely to be alive (Vladimirovna et al., 2014). Conversely, other cultures automatically consider abandoned children as real orphans (Al-Daghaither, 2016). The example of children who are knowingly abandoned by identified parents who voluntarily give up parental

responsibility is referred to as “open abandonment”. Secret abandonment, on the contrary, is where parents abandon their child without disclosing their identity, with no intention of returning, and willingly relinquishing their responsibility (Institute of Work, Health and Organisations, 2012).

Parental abandonment has several reasons, such as cultural disapproval of single or teenage motherhood (Institute of Work, Health and Organisations, 2012). In a recent study in Palestine, for example, Banat et al. (2019) found that over 70% of abandoned children were born to single mothers, 44% of whom were below the age of 20. Parents may abandon a child to rid themselves of the burden of caregiving (Burnstein, 1981). Furthermore, mental health issues, financial hardship and poverty, lower levels of education (Therivel & McLuckey, 2017) or having a gender preference for boys over girls (Wijemanne, 2017) are all other common motivations for abandonment. In Banat’s study, 79% of abandoned children were classified as coming from lower socio-economic backgrounds, and over 80% of abandoning mothers were found to have not completed a primary school level of education. Illegitimacy appears to be the main reason of child abandonment in Saudi Arabia. Commonly, mothers may leave their children for two reasons. Firstly, it can be difficult for both the mother and the child to cope with illegitimacy as they could be socially stigmatised. Secondly, obtaining the child’s official documents is not an easy procedure. Therefore, similar to Banta’s reason, it appears a challenge for a single mother to keep that child. However, more empirical work to investigate this is needed.

1.4.2 Statement of the problem

Alternative care experiences and abandonment are almost synonymous; they both describe potential factors that can cause problems in a child’s present and future development. This difficulty is well-documented in the existing literature (Dozier et al., 2012): abandoned children in alternative care settings that provide insufficient services and programmes (i.e., caregiving that does not meet their needs) are at increased risk of developing mental and emotional challenges, as well as behavioural problems in general (Nelson et al., 2007; Tibu et al., 2014). In addition, this group of children is more likely to report lower social skills and self-worth during childhood and in later life (Weir, 2014).

A significant body of research has demonstrated the negative consequences for children living in alternative care settings. For example, Chapter 2 outlines research which has found that a lack of secure attachment to a caregiver is a risk factor that contributes to the development of poor adaptive functioning in children (Pearce et al., 2001). Children in institutions are required to share services (with one carer responsible for a large number of children, for example), so all staff and employees that look after children in alternative settings are likely to have an impact on the child's development, as the children are more likely to look at them as symbolic figures. The wellbeing of children in residential care is therefore likely affected by those who provide them with care (Little et al., 2005; Stoval-McCleough & Dozier, 2004).

Research on attachment theory has sought to understand the consequences of the caregiving relationship and its links to social, emotional and psychological developmental outcomes. In Saudi Arabia, although alternative care settings (institutions, adoption scenarios) exist, there is a scarcity of carer-child relationship data. This lack of data, however, highlights the importance of investigating critical aspects of the alternative care experience and the carer-child relationship, with particular emphasis on the need to look at the attachment relationship. This current study focuses on attachment theory to quantify the psychosocial, cognitive and attachment development of Saudi Arabian children during middle childhood utilising a simple random sampling from each investigated population (Cohen et al., 2008).

1.4.3 Objectives

The primary aim of this programme of research was to investigate the role that attachment relationships play in the psychosocial functioning of children living in alternative care settings (with non-biological caregivers) in middle childhood in Saudi Arabia. The research presented in the thesis is guided by the following objectives that aim to:

- Highlight and describe the institutional care environments that exist for abandoned children in Saudi Arabia;
- examine children's psychosocial development and cognitive functioning in alternative care;

- explore the concept of attachment in Saudi Arabia among children who live in different social contexts during their middle-childhood;
- examine the effect of alternative care and attachment insecurity on children's psychosocial functioning.

1.4.4 Thesis summary

This thesis explores the risk factors that result from early childhood experiences of being abandoned, as well as those that arise from subsequent relationships with alternative primary caregivers in different settings throughout Saudi Arabia. Psychological issues (emotional and behavioural problems), social skills (loneliness and social dissatisfaction), the perception of self (social competence and self-worth), cognitive functioning, and attachment relationships are explored with respect to three groups of children in middle childhood — those raised in institutions (CRI), cuddled children (CC), and typically-developed children (TD).

This thesis is presented across eight chapters:

The present chapter — **Chapter One** — has provided an overview of alternative care terminology and definitions, as well as the nature of alternative care in Saudi Arabia. The background of the research problem has also been given, as has the paper's aims and objectives.

Chapter Two outlines attachment theory in order to better understand the importance of the carer-child relationship in development; it also outlines previous research on early childhood experiences, psychosocial development, cognitive functioning, and relationships with primary caregivers in alternative care settings.

Chapter Three presents descriptive data of institutional care in Saudi Arabia; it highlights the Saudi child protection system, as well as new policies related to institutional care. This chapter describes Saudi institutions' residential structure, policies, programmes and services implemented to encourage daily life skills and positive emotional and social development. Its aim was to draw attention to the key aspects considered by existing studies of alternative care.

Chapter Four presents the results of translated and adapted scales that were used in the thesis. Two scales were used. The Loneliness and Social Dissatisfaction Scale (Asher et al., 1984), was used to measure feelings of

social integration, satisfaction and social functioning; the Self-Profile Perception Scale (Harter, 1985, 2012) was used to measure how children perceive their social abilities and self-esteem. The World Health Organization's (WHO, 2010) translation and adaptation of instruments process was employed to assess the scales' validity and reliability for the current Saudi-based study.

Chapter Five outlines the results of the investigation into the psychosocial functioning and cognitive ability of children in alternative care; this includes mental health symptoms (anxiety and depression), loneliness and social dissatisfaction, social competence, self-worth and behaviour problems (prosocial, internalising and externalising behaviours), as well as an IQ test. In addition, it considered the effect of care type on development by comparing different groups of cared-for children.

Chapter Six To meet the aim of addressing the gap in our knowledge of attachment relationships in Saudi Arabia, Chapter 6 describes the attachment data obtained from children across care settings. Specifically, the data aims to provide details of the nature of the attachment relationships (attachment classifications), as well as narrative coherence, reflective function, and evidence of safe haven/secure base measurement scales of Saudi children in middle childhood. Other variables were considered here (gender, age, and IQ), to explore links with attachment security. In addition, narrative coherence was examined to evaluate whether it was linked to verbal ability.

Chapter Seven combines data from Chapters Five and Six to extend the thesis's findings and explore associations between key indices of psychosocial function (mental health, behavioural problems, social adaptation, and self-perception) with alternative care groups and attachment insecurity (insecure vs. secure). These data are important for understanding whether the care setting, the nature of the attachment relationship, or their interaction are important in understanding development.

Chapter Eight provides a summary of the empirical studies. It aims to discuss the general findings from the current programme of work in terms of the theoretical framework used in the thesis and in the context of existing empirical findings. In addition, the limitations and strengths of the present research are highlighted, along with implications for future studies.

2 Chapter Two: Theoretical Framework and Literature Review

2.1 Attachment Theory

The family is a unique social system that plays a pivotal role in fulfilling the needs of its members, especially through child-caregiver relationships (Tuckey, 2002). Several theoretical perspectives have examined the relationship between caregiving and developmental outcomes in offspring. In particular, attachment theory provides a useful framework for understanding this relationship. The term attachment is used to characterise the interaction between child and primary caregiver (Ainsworth et al., 1978; Ainsworth, 1998; Bowlby, 1988).

Research leading to the emergence of attachment theory was influenced by Freud's psychoanalytic theory (Colin, 1996). The notion of attachment itself developed from Bowlby's review of Lorenz's (1935) observations of geese, as well as his own observations of animals in their natural environments. In the 1950s, Bowlby developed his theory by observing infant-mother interactions (Bowlby, 1978, 1988). Bowlby proposed that, in the infant-mother relationship, the infant has an innate biological desire to seek proximity to the mother that extends beyond satisfying basic physical needs such as nourishment. Around the same time, Ainsworth (1953) was making experimental observations of mother-child interactions in Uganda and later in Baltimore (1960; see Bretherton, 1992).

Attachment theory is distinct from other theories in that it integrates ethological, biological, cognitive, and evolutionary concepts. This integration paves the way for study of the long-term consequences of child-caregiver relationships, in that it provides a comprehensive understanding of the nature of these relationships (Fearon et al., 2010). Ainsworth defined attachment as "an affectional tie that one person (or animal) forms to another specific individual. Attachment is thus discriminating and specific" (Ainsworth, 1969, p. 2). To form this affectional tie, Ainsworth argued that the child should be able to rely on the caregiver's availability and responsiveness. When in distress, the child will use this tie with the caregiver as a safe haven, forming a secure base from which to explore the environment (Ainsworth et al., 1978).

Bowlby (1988) suggested that success in maintaining a positive relationship with the primary caregiver would lead children towards satisfaction and contentment in life. In contrast, the absence of supportive relationships can place children at risk of later psychopathological problems.

Some researchers have argued that the caregiver-child attachment relationship emerges early in development and is evident by the end of the first year (Geddes, 2003), and remains active over the life span (Bowlby, 1988). Waters et al. (2000) argued that the attachment relationship could remain stable from early life to early adulthood, if there was no significant change in family environment. The quality of this relationship can be observed through several different behaviours that are assumed to reflect the child's experiences in repeated interactions with the primary caregiver, and that are argued to gradually create a mental representation, known as the internal working model (IWM), which retains cognitive and emotional information, as well as behaviours (Holmes, 2014). The child's observed behaviours are likely to reflect caregiver responses to the child's distress status and attempts to seek contact (Ross, 2004).

2.1.1 Internal working model (IWM)

The IWM is a cognitive framework involving a mental representation that captures children's perceptions of themselves, significant others, and the world (McLeod, 2017; Teti, 2001), which stores and codes repeated interactions with the primary caregiver, usually the mother. It is suggested that mental representations of infant and caretaker can be reflected through the special quality of the relationship (Hofer & Sullivan, 2001). The child's behaviours towards the primary carer across mildly stressful scenarios has allowed attachment theorists and parents to classify carer-child attachment relationships.

2.1.2 Attachment classifications

An infant is more likely to have positive expectations of the self and significant others if crucial factors are present: first, an adult caregiver who is able to interpret and is sensitive to the non-verbal communication that underlies the child's behaviour or desires (Bretherton & Munholland, 2008); and second, if the coded or repeated experiences lead the child to develop an organised and effective psychological structure that forms a secure base when

support for exploration is needed, or a safe haven when help and comfort are needed (Fearon et al., 2010). For that reason, Ainsworth and Bell (1978) developed the 'Strange Situation Procedure' (SSP) to capture non-verbal behaviours in infants. The SSP is based on observation, the same practice that attachment theory evolved from (i.e., observing animals). In this method, the primary caregiver (usually the mother) leaves the child with a stranger for a short time, and then returns, in a series of separation and reunion events. The child's reaction to the stranger and to the caregiver during reunion episodes was found to vary as a result of the child's early experiences with the caregiver. If the interactions between child and carer had been encouraging (i.e., the carer was available to the child, and the child subsequently developed adaptive behaviours to deal with life situations), then the child would be more able to manage uncomfortable and challenging circumstances. These behaviours, such as being able to separate from the carer and then seek comfort from them during the reunion, indicates a secure attachment style. Securely attached children have positive mental expectations regarding the self and their relationships with significant others (Colin, 1996).

In contrast to a caregiver's warm proximity and responsiveness, an unhealthy attachment relationship may develop because of a caregiver's neglect, abuse, inconsistent care or certain other factors, such as a continual change of caregivers. A lack of consistent and sensitive caregiving might put the child at risk of developing insecure attachments. The SSP captured two classifications for insecure attachment styles: anxious-avoidant and resistant-ambivalent (Ross, 2004).

The anxious-avoidant classification can be seen in the strange situation where the child, upon reuniting with the caregiver after separation, tries to minimise the relationship with them by avoiding or dismissing interactions. In this style, the attachment figure is characterised as being generally insensitive to the child's distress or unavailable to provide them with support. The children who showed this reaction were described as being rebuffed by their caregivers when they needed them (Kennedy & Kennedy, 2004), which led them to avoid seeking help when faced with challenging events. This attachment representation has been associated with increased externalising behaviours in later life, such as aggression (Renken et al., 1989).

Resistant attachment is reflected in the child becoming distressed at the time of separation, and reluctant to play or to approach the caregiver on reunion (Colin, 1996). This pattern of behaviour is argued to be the result of a history of frustration due to inconsistent caregiver responsiveness, which makes the child both dependent on the caregiver and unable to rely on them. The child might exhibit exaggerated behaviours to get the caregiver's attention when they are upset or stressed. Moreover, strangers or people who are not close to the child cannot easily calm them. This attachment style was found to be more likely associated with more internalised issues later in life, such as anxiety and depression (Goldberg et al., 1995).

Main and Solomon (1990) later defined a fourth attachment classification: disorganised-disoriented. This classification resulted from a review of studies that had reported difficulties in matching some children to the three existing classifications. The three attachment types defined by Ainsworth and Bell are all considered to be organised patterns, because in each one, the child shows the ability to maintain a relationship with the caregiver. In contrast, in the absence of stable and predictable methods of interacting with the caregiver, a child may develop attachment disorganisation. Main and Solomon (1990) defined disorganised attachment as a result of the child experiencing a frightened or frightening caregiver who has intentionally or unintentionally threatened them. Consequently, the child may have difficulty managing conflicts with others and rely on strategies to reduce the level of pressure, such as expressing contradictory behaviours. This attachment style is the one predominantly associated with behavioural problems (Madigan et al., 2016).

Van IJzendoorn et al (1999) in their meta-analysis, estimated that in low-risk middle class families, 62% were classified as secure, 15% as avoidant, 9% as ambivalent, and 15% were classified as disorganised. In high-risk samples, however, the proportion classified as disorganised can be much higher. Noteworthy is that the distribution of the attachment styles can show some variation in cross-cultural studies. These data suggest that the secure style of attachment in middle-class groups cross-culturally was 50 per cent and more (Carlson & Harwood, 2003; Leyendecker et al., 1997; Main and Solomon 1990). However, insecure styles show larger variations cross-culturally (e.g., Archer et al., 2015; Bakermans-Kranenburg & van IJzendoorn, 2009; Jin et al., 2012; Tomlinson et al., 2005; Zevalkink, 1997). Crucially, for this thesis, to

the author's knowledge, there is currently no published data on the distribution of attachment classifications in Saudi Arabia.

2.1.3 Usage of terminology in attachment theory

Ross (2004) sought to provide a clear and specific conceptualisation of the terminology, finding that attachment classifications in the literature were often captured using different terminology. For example, in the original work of Ainsworth et al. (1978), attachment relationships were described as above (secure, avoidant, resistant), with the disorganised attachment classification added later. Whilst secure and disorganised attachment classifications remained, George et al. (1985) proposed dismissing the 'avoidant' classification and replacing 'resistant' with 'preoccupied'. Bartholomew (1990) removed 'disorganised', and added 'fearful-avoidant'. This variation in terminology might arise in general from the type of measure (behavioural or representational) or the age category (children–adults) used by each theorist to manifest their intended construct (Jewell et al., 2019).

2.1.4 Attachment hypotheses

Attachment theory proposes that the concept of attachment is *universal* and exists across cultures (see Chapter Six). Secondly, attachment theory framework suggests it is more likely that infants develop a secure and long-lasting pattern of behaviour in the absence of significant life events that pose a danger to their health, life, and success (Mesman et al., 2016). In addition, insecure attachment can develop in the presence of risk factors (Holmes, 2014), such as child maltreatment (Cyr et al., 2010), and the experience of an unstable or insensitive caregiving environment (Lionetti et al., 2015). Thirdly, it was suggested that attachment security depends on the level of sensitivity and promptness of response to attachment signals demonstrated by "childrearing antecedents" (Mesman et al., 2016, p. 854). Lastly, Bowlby (1977) presumed that the affective relationship between carers and children was at the core of shaping a personality, along with interpersonal regulation and attitudes that impacted the present or future competence of the child through development (Bosmans et al., 2016; Groh et al., 2016).

Although these three main hypotheses were discussed in the context of the validity of cross-cultural attachment research (Mesman et al., 2016; van

IJzendoorn, 1990), they appear to be generally core elements of attachment theory.

2.1.5 Implications of attachment representations

Attachment theory has proposed that children categorised as 'secure' are more likely to be psychologically well (i.e., report fewer internalising symptoms), socially competent across different contexts (i.e., able to develop and maintain effective peer relationships), report self-competence, and display positive self-perception. Moreover, researchers argued that individuals' varying behaviour can be partly attributed to early attachment relationships (Colonnesi et al., 2011). Consistent with the attachment framework, a large body of research supports the proposition that secure attachment is linked to more positive developmental outcomes (Mikulincer et al., 2003).

DeKlyen and Greenberg (2016) reviewed the theoretical link between attachment insecurity and behavioural and emotional challenges from the perspective of either attachment or related theories (such as theory of mind) in childhood. They found that attachment theorists argued that a child classified as avoidant would express insecurity through aggressive or hostile behaviours. Moreover, this child could manifest their anger indirectly through lying, bullying or being insensitive to others. Anxious-resistant children could be easily over-stimulated, displaying impulsiveness, short attention spans, restlessness, and low tolerance for frustration. In addition, these children are more likely to develop internalising behaviours. The review also highlighted that a child classified as having a disorganised attachment could experience significantly challenging developmental outcomes, since the source of safety is concurrently a source of fear. Thus, the child becomes unable to enlist assistance from the caregiver, isolates themselves, and struggles to handle upsetting stimuli, all of which culminates in dissociation. A disorganised type is viewed to be strongly linked to childhood psychopathology. All insecure attachment styles were associated with increased risk for antisocial behaviour, lower levels of exploration, and poor emotional regulation.

Consistently, previous empirical research found an association between insecure attachment with behavioural problems and social competence. For instance, children aged 12 years and younger, categorised as avoidant or disorganised, showed higher externalising behavioural problems (Fearon et

al., 2010; Munson et al., 2001). On the other hand, securely attached children were found to be more confident and independent, and to exhibit more positive social behaviours (Cassidy et al., 1996; Thompson, 2016). Furthermore, studies have shown that peer acceptance or rejection was found to be related to attachment security. Using different measures to assess attachment and peer relationship quality, adolescents classified as securely attached, for example, were found to behave more pro-socially and to be less shy or withdrawn, as well as more likely to be accepted by peers (Dykas et al., 2008).

Additional studies have explored the effects of attachment over time. In a 30-year longitudinal study, Sroufe (2005) investigated whether infant attachment history could predict behaviours including social competence and coping in later stages of life. Infants and their mothers who were viewed as having a moderate risk of disadvantage (associated with poverty) were recruited. Various predictors, including peer relationships, were used to consider factors that might be linked to outcomes not explained by attachment. The authors measured attachment using their own observational assessment method together with Ainsworth's Strange Situation Procedure (SSP). The children's attachment was assessed multiple times during infancy, and behaviours were assessed frequently from birth to adulthood using methods such as questionnaires, records and observations from caregivers, teachers, and counsellors, as well as interviews with the children.

The findings indicated that, across the course of development, securely attached children showed increased flexibility and the ability to "bounce back after stress or difficulty" (p. 357); they also showed lower scores for items linked to poor emotional regulation, such as being less "inhibited and constricted". In addition, securely attached children were reported to be better able to initiate contact or respond to peers, and to use positive methods (showing positive effects when approaching and responding to peers) to build and sustain these interactions. In contrast, the study reported that children categorised as having an insecure attachment style in infancy had a high level of dependency on adults (e.g., teachers and camp counsellors). For instance, resistant children were described as dependent – hovering around adults, and seeking assistance even for little things. Avoidant children showed their dependency obliquely, seeking out adults unobtrusively during quiet times, rather than when angry or irritated. The results also showed that, in middle

childhood, resistant children had difficulty developing and maintaining friendships with peers, and showed higher levels of anxiety. Similarly, avoidant children showed less desire to initiate contact with peers and had more behavioural problems.

Sroufe's (2005) study highlighted the importance of early childhood experience and its role in predicting developmental outcomes in later life. Overall, it gives insights for future work in attachment research, especially for understanding development in at-risk populations. However, the study does not assess attachment during subsequent developmental phases, which means that it cannot be used to consider whether later experiences at school or within peer relationships may have affected attachment representations. This is important because some attachment research has demonstrated discontinuous attachment behaviours over time. For example, McConnell and Moss (2011) reviewed short- and long-term longitudinal studies to investigate the consistency of attachment security over the lifespan. The study highlighted the importance of attachment assessment at each developmental stage. They found a variation of evidence between continuity and discontinuity.

It has been suggested that attachment patterns reflect caregiver–child relationships across cultures, as demonstrated by studies in Japan (Yum & Li, 2007), India (Chakraborty et al., 2015) and Turkey (Altinoglu-Dikmeer et al., 2014). In the Arab world, some studies have explored attachment relationships (Abu-Ghazal & Falwah, 2014; Abu Nimr, 2011) in typically-developed children. However, there is scant research evidence exploring attachment concept. For instance, Al Obeidi and Al Saadi (2015) conducted a study to measure the relationship between secure attachment and social interaction among 400 pupils aged 6-8 years selected randomly in Iraq. The attachment relationship was measured using a mother-reported questionnaire. The findings were consistent with research on middle childhood (Clark & Symons, 2009; Sroufe, 2005), in that they showed a positive association between securely attached children and positive social interaction.

Attachment disorder

In the former edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), attachment disorder included two subtypes that were inhibited reactive attachment disorder (IRAD) and disinhibited reactive

attachment disorder (DRAD) (American Psychiatric Association, 1994). In the fifth edition of DSM, a major revision was made resulting in considering the former two sub-types as two distinct disorders; the former inhibited type is now captured in reactive attachment disorder (RAD) (American Psychiatric Association, 2013). However, the former disinhibited type has now been defined separately as disinhibited social engagement disorder (DSED).

RAD and DSED are both a result of extremes of insufficient care (e.g., institutional settings) in the early life usually before the age of 5 years (Zeanah & Gleason, 2015). However, both capture different patterns of atypical behaviours (Zeanah et al., 2016). RAD is a serious condition for young children where the child does not establish a healthy attachment with their primary caregivers and is likely to show signs of unexplained sadness, fear, withdrawal or irritability (Pietro, 2016). Moreover, those children fail to ask for support or to seek and respond to comfort. They also watch others but with no interest to engage in social interactions. In contrast, children with DSED show no fear of strangers with patterns of behaviours that are overly 'friendly' with adults they do not know (Edwards, 2020). As reported in some studies (e.g., O'Connor & Zeanah, 2003), children with DSED also show a lack of appropriate physical and social boundaries such as interacting with adult strangers in close proximity and deliberately pursuing close physical interaction. Thus, children with RAD cannot express their attachment behaviours towered their preferred caregiver while those with DSED non-selectively exhibit proximity-seeking behaviours to strangers (Zeanah & Gleason, 2015).

2.2 Psychosocial Function and Attachment in Children Who Experienced Alternative Care

2.1.1 Early childhood experience

In the early 1950s, Bowlby explored the mental health of homeless children who experienced post-war maternal deprivation and separation (Bretherton, 1992). Following that study, a number of multi-method studies have tested the effects of early childhood experiences in alternative care, either in institutional or adoptive care settings; for example, the English and Romanian Adoptee (ERA) project (Rutter & the English and Romanian Adoptees

[ERA] study team, 1998) and the Bucharest Early Intervention Project (BEIP) (Zeanah et al., 2003; Zeanah et al., 2005).

Juffer et al. (2011) reviewed the findings of seven longitudinal studies that explored the impact of early childhood experiences among children who had experienced institutional care. These studies were conducted on adoptees in five different countries – Canada (Romanian Adoption Project, 1992), Greece (Metera, 1996), Spain (Adoption from Institutional Care, 1995), the Netherlands (Rotterdam, 1986; Leiden, 1985) and the United Kingdom (ERA, 1993; Tizard & Hodges, 1968, 1969). The studies assessed children in different developmental domains (mental health, social relationships, cognitive and intellectual impairment, and child–caregiver relationships). The broad conclusion was that early childhood experiences affect development, depending on the type of institutional care and the level of psychosocial deprivation experienced. Moreover, they highlight that children adopted prior to 4-6 months of age showed better developmental outcomes than those who remained longer in institutional care before adoption.

The ERA longitudinal project examined developmental domains, such as behavioural problems, peer relationships, and cognitive functioning. This project included Romanian children who had been adopted from institutional care either before the age of 6 months or after the sixth month of age compared with adoptees from the United Kingdom (Rutter et al., 2001). This study found significant deprivation in Romanian institutional conditions; in some institutions, one staff member cared for 30 children, there were no toys or educational activities, and only minimal child–caregiver interaction. Feeding and personal care did not meet basic needs. In addition, some children had experienced more than one institution (Rutter et al., 2007). The study ultimately identified four developmental areas that related to institutional deprivation: disinhibited attachment, cognitive impairment, inattention/overactivity, and quasi-autism (Brown, 2010).

Another longitudinal project, the BEIP (Zeanah et al., 2003, Zeanah et al., 2017), used a randomisation control method to implement an intervention for some children, whilst also assessing those who remained in institutions. Commencing in 2000, the study included 136 Romanian children aged between 6-31 months who had been abandoned around or after birth and placed into institutions; 68 were randomly placed into a high-quality foster

care intervention; 72 children from typical homes were included as a control group. All of the children were assessed multiple times, at 2.5, 3.5, 4.5, and 8 years old, and followed until the age of 12. Data collection focused on different developmental domains, including attachment, social and emotional development, and cognitive function. The findings of this project revealed that those who were placed into foster care earlier showed better outcomes across developmental domains compared to their institutional peers. The results revealed a developmental deficit in almost all domains for the children who remained in the institution. The study highlights the importance of early experience in development. It also explains the variation in children's developmental trajectories: the earlier their conditions improve, and the earlier adversity is addressed, the more easily the change occurs in the child (Sroufe, 2000).

2.1.2 Psychosocial development and cognitive function in alternative care

Childhood is a time of substantial transition across developmental trajectories (emotional and behavioural domains, social competence, and self-perception). Increasingly, research has looked at whether children and adolescents from alternative care settings, in particular institutional residents, are at increased risk of developing psychological, social, and cognitive problems. The findings from cross-sectional and longitudinal data have indicated that children in alternative care have an elevated risk of developmental problems, including internalising and externalising behaviours (Gagnon-Oosterwaal et al., 2012; O'Connor et al., 1999; Ojha et al., 2013).

Emotional and behavioural symptoms

Emotional and behavioural symptoms comprise internalising problems such as anxiety and depression, and externalising problems such as rule-breaking and aggression. The former typically refers to the internal expression of distress, and the latter towards outward expression (Cosgrove et al., 2010). Fisher's (2015) literature review found evidence that children raised in alternative care who had experienced negative early childhood occurrences showed higher rates of these symptoms, including psychopathological problems and maladjustment, than the general population.

These findings are consistent with those seen in Ismael's (2009) study of institutional care in the Gaza Strip, which compared two groups of children: those living in alternative families (defined as foster or adoptive care based on the nature of care provided) following a residency in institutional care; and children and adolescents aged 10-16 years old who were currently living in institutional care. Ismael found a high prevalence of depression and behavioural problems in both groups, but children who lived with families showed fewer emotional and behavioural symptoms than those who were still living in institutional care. In addition, Ismael found a link between challenging early childhood experiences, caregivers, and behavioural problems.

A large study by Jiménez-Morago et al. (2015) included 230 children aged between 4-10 years old living in four different care settings (institutional care, institutional adoption, kinship children who live with a family member(s), and non-kin foster care) and compared them to a control group from a normative population in Spain. The study looked at early history prior to being placed into care, and focused on the children's current level of psychological adjustment. The authors created an early experience index, and used interviews with parents or primary caregivers, as well as a strengths and difficulties questionnaire (SDQ).

Parents in the study reported that most of the children had experienced negative childhood events (maltreatment, chronic illness, or parental substance abuse). Children in kinship displayed significantly lower adversity compared to the other care groups, since they were placed into this care setting at an earlier age. Institutionalised children exhibited the highest number of difficulties; followed by non-kin-fostered children. Children from institutions showed higher emotional problem scores, whilst the adoptive group was similar to the control group in that their scores fell within typical limits. A significant correlation was found between age at placement, and emotional and behavioural problems. The duration of placement was significantly negatively correlated to emotional problems.

Al-Suwaihri (2010) conducted a descriptive study of orphans with unknown parents who had been abandoned soon after birth, all within one institutional care setting in Makkah, Saudi Arabia. The study involved 163 males aged 10-25 years old. The aim was to identify the psychological and

social problems of the residents, and the relationship of those problems to age. Al-Suwaihri found high levels of anxiety, feelings of loneliness, and behavioural issues, such as aggression. Age was a factor in that younger people reported more anxiety problems, which is consistent with the findings of Jiménez-Morago et al. (2015).

Juffer and van Ijzendoorn (2005) carried out a meta-analysis of studies of behavioural problems in adoptees from different countries. They aimed to estimate the effect of international adoption on internalising and externalising problems, and mental health referral; this group was compared with non-adoptees and domestic adoptees. There was no minimum assessment age. The results showed higher behavioural problems (total, internalising, externalising) among adopted children (both international and domestic adoptees combined) compared to those living with birth parents; they also showed more mental health referrals. The international adoptees group showed the same results for behavioural problems and mental health referrals as the non-adopted group. International adoptees exhibited lower behavioural problems (total, internalising, externalising) together with fewer mental health referrals, when compared to domestic adoptees. Preadoption adversity (e.g., serious neglect, abuse, or malnutrition) was correlated to higher total and externalising behavioural problems, but not internalising behaviours. Neither age nor gender were found to moderate outcome. With regard to the age at adoption, the study looked at children who were adopted either before or after their first birthday and may better look at younger age as some studies like the Canadian study and ERA project found children adopted at or before the sixth month of age were better in development compared to those who were adopted later.

Social and self-functioning

A child's social relationships may form a barometer for psychosocial adaptation, as the social environments of children develop and intensify quantitatively in later developmental stages (Han & Choi, 2006). The few studies that have explored the social aspects of development among alternative care residents, in particular those in institutional care (Palacios et al., 2013), found increased feelings of loneliness (discomfort of being alone or solitary; APA, 2014). One example is Ptacek et al.'s (2011) large study, which monitored the development of social and emotional loneliness amongst

360 children from three different settings (institutional care, foster care, living with parent/s). The study found that children from institutional and foster care showed a higher level of loneliness than those who lived with biological parents.

Consistent with the institutional findings, Al-Suwaihri (2010) also found that most institutionalised children and adolescents from primary and middle schools reported increased feelings of loneliness, compared to older institutionalised people in the same study. Al Attas (2013) examined psychological loneliness in 32 children and adolescents living in institutional care with a mean age of 15.32 years, compared with 22 children and adolescents living with birth parents in Saudi Arabia with a mean age of 15.82 years. To see how lonely institutional residents feel, the study used a self-reported measure. Although the findings did not indicate a significant difference between groups, institutional residents had a higher score mean, which can be an indication of increased feelings of loneliness.

With regard to social competence and friendship, one Spanish study compared adopted children aged 4-8 years old to children raised in an institution or at home (Palacios et al., 2013). The study used data obtained from primary carers and teachers. The results showed institutionalised children having more problems with peers and lower social skills than the adopted group, whereas adoptees showed small differences with typically developed children. In other words, the study clearly showed that children who spent years in institutional care showed increased social problems (Warger & Kleman, 1986).

Challenges relating to social adaptation and community integration could lower self-esteem among alternative care residents (Al-Bar & Abu Farraj, 2011). According to the American Psychological Association (APA, 2014), self-esteem is the degree to which the individual has a sense of their own worth or value, and how they view themselves, and this perception of self is largely influenced by how people around the child view and respond to them.

Nsabimana et al. (2019) investigated whether institutionalisation impacted a child's self-esteem. The study included 180 children and adolescents (96 of whom were institutionalised residents) aged 9-16 years old, and who were either orphans or non-orphans; they were compared to children who lived at home with either one or both parents. The results

revealed no significant effect of institutional care on self-esteem, though children in institutions did report lower self-esteem than those who lived with their parents. It is possible that the groupings affected the results. For example, the non-orphaned, institutionalised children who reported higher self-esteem could have been living in institutional care due to poverty (i.e., having entered the institution at an older age).

Results from the adoptive groups showed better outcomes for self-esteem. A large meta-analysis by Juffer et al. (2007) included 88 studies that looked into whether adoption could result in lower self-esteem among children aged 4 and older, when compared to their non-adopted peers (those living with birth parents or in institutions); they attempted to ascertain whether a child's not feeling integrated into the non-birth family could result in lower self-esteem. Studies included were those used global self-worth measures. Factors including gender and age at placement or assessment were also investigated, as was whether the study included transracial adoptees. The combined results showed that adoptees did not differ from typically developed children on any factor. However, transracial adoptees reported lower self-esteem than same-race adoptees. When comparing adoptees and institutionalised children, adoptees showed better self-esteem.

Similarly, a large study that included over 600 children and adolescents compared self-reported self-esteem across four groups: adopted children, their classmates living with biological parents, children with psychosocial problems who live with biological parents, and institutional residents (Sánchez-Sandoval, 2015). Adopted children showed results similar to their classmates, and both had significantly better self-esteem than the other two groups. Similarly, findings for children in Algeria who live with alternative (non-biological) families because of early abandonment were consistent with the meta-analysis finding (Dalila, 2015). All children who were placed into alternative families in their first months of life showed typical levels of self-esteem. These findings may suggest that early adoption can be an intervention factor that allows children to develop healthy self-worth and minimises the negative impact of abandonment.

Cognitive function and developmental catch-up

Cognitive function is a term which refers to the mental processes involved in knowledge acquisition, information manipulation, and reasoning

(Kiely, 2014). The relationship between institutional experience and low IQ has been widely investigated (e.g., The St. Petersburg-USA Orphanage Research, 2005; Yagmurlu et al., 2005). A meta-analysis by van Ijzendoorn et al. (2008) investigated the intellectual development of children living in institutional care by comparing them to non-institutionalised (fostered, biological) children from 19 countries across the world. They aimed to test whether an intellectual delay was observable when compared to the non-institutionalised group. In addition, they looked at the effect of child's age at both entry and assessment times, gender, and institutional characteristics, such as country economy level and carer-child ratio. They also compared studies that specifically used standardised and non-standardised IQ tests.

The results showed that institutionalised children exhibited significant delays in intellectual development. Several characteristics of the study (type and year of publication, comparison group, type of IQ test, gender, length of stay, and carer-child ratio) were not found to moderate the results. Age at entry and assessment time, however, were found to moderate the cognitive delay, with younger children displaying poorer cognitive function. Interestingly, it was found that the country's socioeconomic level moderated IQ development – children living in countries with a low human-development index (in terms of life expectancy, national income, and educational level) showed greater IQ delay. Surprisingly, the caregiver-child ratio (1:1 to 1:20) did not show any significant effect in this area. The authors attributed intellectual development delays to the group care setting, and to the tendency for families to send children with lower intellectual abilities to institutions because of the specialised services and advanced resources available there.

Children living with enhanced care showed better IQ scores. In the BEIP (Almas et al., 2016), fostered children aged 12 showed continually improving IQ scores, compared to their institutionalised peers. In the catch-up study, the authors examined the impact of early institutional experience on cognitive performance using WISC (Wechsler, 1991). Fostered children were compared to two groups: institutionalised and never-institutionalised children. The results showed a significant difference between fostered and institutionalised groups, as well as between fostered and control groups. Specifically, fostered children showed higher verbal comprehension than their institutionalised peers; this might be an indication of more effective child-carer communication in foster care. The time spent in institutions was significantly negatively

correlated to IQ scores in both fostered children and their institutionalised peers. The higher IQ scores in fostered children showed some level of consistency with previous research that looked into more stable caregiving, such as children who were placed into adoption after a period of institutionalisation (van Ijzendoorn et al., 2005).

In the catch-up adoption model of meta-analyses that included 270 studies looking at the effect of adoption on development, van IJzendoorn and Juffer (2006) looked at cognitive development. The results showed variation of the outcomes with a large effect size (d = 1.17), highlighting that adopted children outperformed their school peers and siblings in the IQ performance, and to non-significant effect size (d = −.13), showing a small difference between school peers and siblings. The study also found no significant effect of age at adoption on IQ. However, they concluded that age could act as a protective factor, as the earlier the child was adopted, the better their cognitive performance. Loman et al. (2009) looked at cognitive performance in two groups of adopted children from either foster or institutional care, with an average of 8 years of adoption. All children were adopted at the age of 8 months or younger. Children adopted from foster care showed increased cognitive functioning.

The young adult follow-up study in the ERA project (Sonuga-Barke et al., 2017) showed that children who experienced a short span in institutional care (i.e., < 6 months before adoption) were not significantly different in their IQs across childhood, adolescence and young adulthood to children who were adopted as young infants from within the UK. However, they scored significantly higher on IQ than those who stayed longer (i.e., >6months) in Romanian institutions at the age of six, 11 and 15 years. Interestingly, in young adulthood any differences in cognitive impairment between the adoptee groups resolved, suggesting that there was further catch-up during the transition to young adulthood in IQ for the group who experienced prolonged institutional deprivation (> 6 months).

Nevertheless, Gunnar et al. (2000) raised a concern regarding the measuring of cognitive ability in alternative care, especially in those who had experienced institutional care, as most studies used “non-specific assessment tools” (p. 680) such as the Denver Developmental Screening Questionnaire (Frankenburg & Dodds, 1967) which looked only at general cognitive

functioning rather than capturing specific aspects of cognition. It is thus important to look whether specific cognitive tests could reveal low-performing domains.

As stated earlier, children who experienced early life deprivation are more likely to exhibit delays in their development including in physical growth and language development (van IJzendoorn et al., 2011). After being placed into adoption care, children can show developmental catch-up to their family-reared peers. For example, results from the ERA project showed considerable catch-up for height and weight and partial catch-up for head circumference in the first years following adoption from deprivation (Sonuga-Barke et al., 2010). Similarly, catch-up for the height and weight recovery was also found in adopted children in Spanish families with catch-up more complete in height and weight than head circumference (Palacios et al., 2010).

However, adopted children appear to lag behind their family-reared peers in language development (Tottenham, 2012; van IJzendoorn et al., 2005). For example, in a follow up study of Chinese children who were adopted from institutional care in Canada at the age of six months compared to children reared with birth families, adopted children scored lower than their family-reared peers in expressive language at the age of 18 months (Cohen et al., 2008).

2.1.3 Attachment in alternative care

The central aim of attachment theory is to trace the early experience between child and carer by capturing the child's internal working model (IWM) of self and significant relationships. In contrast to those residing in families, the literature has shown some variance in findings on attachment security amongst children living in alternative care. For instance, even though there was a significant difference between those raised at home and in institutions, certain studies (Dobrova-Krol et al., 2010; Herreros, 2009) found a comparable rate of attachment security in both groups. Additionally, other research has found that children who have lived in the institutional care system showed a higher rate of patterns of insecure attachment (e.g., over 80% of children in one study by Barone et al., 2015).

The BEIP sought to determine whether institutionalised children placed with foster families showed increased security of attachment compared to

children still living in institutions (Smyke et al., 2010). The effect of a child's age at placement was also investigated, as well as other factors, such as gender and ethnicity. The results showed that over 17% of children living in institutional care were classified as securely attached, compared to over 49% of the fostered group. The results showed some variation between institutionalised and fostered groups in the prevalence of insecure patterns. No significant differences were found between fostered children and never-institutionalised children, nor across gender and ethnicity in the attachment classifications.

The effect of placement age in the BEIP study was evident, in that children were more likely to develop attachment security when placed into foster care before the age of 24 months. In all groups, the quality of caregiving was not a significant predictor of attachment security. However, cognitive development was found to be a significant predictor of attachment organisation, as children who showed organised classifications had higher IQs than those in the disorganised group. Although these results have important implications, they are limited to the child's age at placement. The Romanian childcare policy allows children to be placed into care only after the sixth month of birth. This policy raises the possibility that the positive effects of early placement for fostered children may have been overlooked.

Recently, Lionetti et al. (2015) reviewed ten studies that assessed attachment in 400 children in institutional care across seven countries, and compared them to family-reared children between the age of 10-96 months. Four moderators were also tested: country of origin, attachment measure, age at institutional entry, and age at assessment time. The results showed a higher prevalence of insecure, disorganised, or non-classifiable attachment in institutionalised children, with a percentage mean of over 80%, compared to 45% for the control group. Representational assessment procedures that assessed the internal attachment representation in Eastern European countries moderated attachment insecurity. An Eastern European country of origin for the institutional care, and younger age at entry, were both related to increased prevalence of attachment disorganisation or not-classified patterns. The study concluded by questioning the difference in the classifications of attachment and how necessary it was to clearly capture the Eastern European institutional community by evaluating resources. The study is important because it draws attention to the limited number of studies that

assess attachment among children and young people who still live in institutional settings.

A pilot study aimed to look at attachment representations in 24 Italian children, aged 9-13 years old, removed from home and placed in institutional-foster care, compared to 35 children living with their biological parents (Zaccagnino et al., 2015). Attachment was assessed using the child attachment interview (semi-structured interview designed to measure attachment in middle childhood). The results revealed that children living in care showed more insecure and disorganised attachment than the control. The care residents also showed evidence of lower reflective function (the ability to assume mental perspective of self and others).

Van den Dries et al. (2009) performed two sets of meta-analyses to examine whether adopted children are at elevated risk of insecure attachment. The authors looked at studies utilising either observational attachment assessments, or observational and self-report assessments for children and adolescents aged 4-18 year old. The results of the observational assessments revealed that children placed into adoption before the age of 12 months showed similar attachment profiles to those of biological children, while those placed after 12 months were less secure. When comparing adopted children to institutionalised children, adoptees were less disorganised, and those who were adopted early showed a higher prevalence of secure attachment. The results showed no difference between adoptees and non-adoptees when including self-reporting measures. Comparing adoptees and institutionalised children, those who were adopted early showed a higher prevalence of secure attachment. The importance of this study relates to how it measured attachment in different groups and ages, which helps to capture the variance in the findings.

The Metera longitudinal study looked at children's attachment while they were in institutions, and after they were placed into adoption, and compared them with children who live with their biological parents (Vorria et al., 2003; Vorria et al., 2006). In the first phase, the study included 86 institutionalised infants aged 12 months. Attachment was assessed using the SSP. They found 66% of institutionalised children were classified as disorganised, compared to 25% of the home-reared children. The follow-up study included 61 children adopted from the institution at the age of 4, and compared the adoptees'

attachment security with that of children living with biological parents, using the Attachment Story Completion Task, a narrative method to measure attachment security (Bretherton et al., 1990), and the attachment Q-sort (Waters, 1987). It was found that the adoptees were less secure than the control group, and moreover that the adoptees were found to be less coherent in their narratives (i.e., there was a greater absence of narration logically following event sequence) and more avoidant than the control group. They concluded that an extended experience in early institutional care had a long-lasting, negative effect on adoptees, even in the absence of adverse early experience.

In a short-term longitudinal study design, Van den Dries et al. (2012) investigated attachment among adopted children aged 11-16 months on arrival from institutional or foster care in China. The children were assessed twice, at 2 and 6 months after their adoption. Fewer children with prior institutional care experiences were categorised as securely attached, and this group also exhibited a higher rate of disorganised attachment. Children who had a foster experience were comparable to the normative distribution data in their attachment security. Both fostered and institutionalised adopted children showed more disorganised attachment compared to normative data.

O'Connor et al. (2003) compared 4-year-olds from three groups in the ERA project, with a view to examining attachment patterns after experiencing severe early deprivation. To assess attachment, a modified separation–reunion procedure with five episodes, including a semi-structured play, was applied by observing behaviours (e.g., proximity, speech and conversation). The four attachment classifications were assessed, and a fifth pattern was added – insecure-other – for those who were insecure but did not fit into one of the three patterns; this was applied to children who displayed more than one attachment style. The adoptees from the United Kingdom exhibited the highest rate of secure attachment. In contrast, more than 50% of the late-adopted Romanian group showed the highest proportion of insecure-other attachment classification.

The comparison of adoptees and non-adopted children resulted in various conclusions. For instance, to determine the effects of late adoption, Pace and Zavattini (2010) measured attachment representations in 20 adoptive mother-child dyads (aged 4-7 years old), compared to 12 biological

dyads. The attachment classification was measured twice over a 6-month period. After two months of adoption, only 15% of the adoptive group were classified as secure, compared to over 65% of the control group; after six months, the adoptive group showed an increase in attachment security, with 50% being classified as secure. Pace and Zavattini concluded that the increased rate of attachment security was seen among children who lived with secure mothers. Despite the small sample number and children being placed into adoption at a later point in childhood, the results can be an indication of higher carer responsiveness and sensitivity promoting the development of secure attachment.

Attachment insecurity has been found to predict psychosocial challenges (Kennedy & Kennedy, 2004; Thompson 2000), and outcomes can often be traced back to early childhood experiences, even after the child has had adequate caregiving (e.g., after being placed with an adoptive family) (e.g., Tarullo & Gunnar, 2005). One large investigation examined the association between attachment and depressive symptoms in children who had suffered adverse childhood experiences (ACEs) like abuse or loss of a family member (Suzuki & Tomoda, 2015). The sample included residential foster children in Japan aged 9 and above. The results showed that attachment relationship mediated ACEs and depressive symptoms, with children classified as ambivalent and avoidant reporting more depressive symptoms.

Similarly, a recent study in Jordan tested the correlation between attachment security and anxiety among 30 orphans (15 boys and 15 girls) between 16-18 years of age living in institutional care (Wreakate & Tannous, 2017). A negative correlation was found between attachment security and anxiety. In contrast, a strong positive correlation was also found between the anxious and avoidant attachment classifications, and anxiety. While this study is one of the few that measured attachment classifications in alternative care in the Arab region, it would have been more beneficial if the authors had also looked at the possibility of disorganised attachment and its effect on emotional development.

In the third phase of the longitudinal work conducted on Romanian orphans adopted in Canada between 1990–91 by Fernyhough (2003), the children had spent at least eight months in Romanian orphanages prior to adoption. The study examined adoptees' attachment security and behavioural

problems, and compared attachment security between phases two and three. The mean age of children at the third assessment was 10.5 years. The findings showed that more than double the number of children were classified as insecure (versus secure). Furthermore, children in the insecure group were significantly more likely to show behavioural problems.

Additional studies have looked at attachment and social competence (e.g., peer relationships) in alternative care. In a study with a sample size (n = 116), Barcons et al. (2012) explored the relationship between adoptees' interpersonal relationships with peers, and attachment relationships among internationally adopted children in Spain. The children were originally from different countries (throughout Latin America, Africa, Asia, and Eastern Europe) and had lived for a minimum of two years with their adoptive families. The securely attached children showed higher scores in their relationships with peers than the insecurely attached.

Similarly, McSherry et al. (2016) found that children with a history of secure attachment had fewer problems with peer relationships and demonstrated higher self-worth. This association between attachment security and social function has also been supported by previous work (Cassidy et al., 1996; Schneider et al., 2001). However, the substantial number of studies testing attachment security and social relationships, including peer relationships, is limited. Few studies have focused on attachment and peer relationships in middle childhood (Booth-Laforce et al., 2006).

The theoretical assumptions and empirical results from different projects provide evidence that some factors allow children to overcome developmental challenges. Attachment theory hypothesised that attachment security would act as a protective factor against life hardship (DeKlyen & Greenberg, 2016; Mesman et al., 2016). For instance, some studies have shown that interventions centred on caregiving, such as training caregivers and increasing child–caregiver interactions, can improve developmental outcomes in alternative care (Dozier et al., 2012; The St. Petersburg-USA Orphanage Research Team, 2008). Moreover, the results of the ERA project showed that children placed into adoption earlier showed better outcomes than those who stayed longer in a deprived environment (Rutter et al., 2007). In addition, it has provided promising results in terms of child 'catch up' in the first two years, and consistent progress in adolescence (Brown, 2010); the BEIP also

supports these results (Humphreys et al., 2015). Children assigned to high-quality care with trained caregivers demonstrated evidence of improved development by showing fewer signs of attachment issues and psychosocial problems over time (Humphreys et al., 2017).

Whilst these findings are important, their evidence base is limited. For example, a number of studies included children from Eastern European countries, such as those conducted in Romanian orphanages, the care at which is considered one of the worst in the world due to extreme psychosocial deprivation. Hence, generalising these results to other cultural settings may be problematic. Second, the research most often highlights the early childhood experiences of those who have left institutional care to be adopted or fostered (e.g., Vorria et al., 2006; Wiik et al., 2011), which is termed post-institutional care, whilst little focus is made on those who remain in institutional care beyond infancy. This restriction is partly due to the emphasis on the move from institutional to family-like care in Western societies (Dozier et al., 2012), where the majority of the research in this area has been conducted (i.e., Adoption from Institutional Care, 1995; Rotterdam, 1986; Leiden, 1985).

Varying ages and attachment assessment methods highlight research gaps. Studies that measured caregiving relationships among those who experienced early alternative care were usually conducted in early childhood, particularly in infancy (Bakermans-Kranenburg et al., 2011; Smyke et al., 2010); with little attention given to middle childhood. Moreover, data from studies that assessed attachment showed some discrepancies in their results due to the assessment type (observational vs. representational) or the participants used (child vs. caregiver) (Lionetti et al., 2015). In addition, parental reports were commonly used to measure attachment in middle childhood and adolescence (Chakraborty et al., 2015; Wreakate & Tannous, 2017), which may not capture the attachment clearly.

In Saudi Arabia, there are a number of issues regarding attachment in children who live in alternative care settings. Firstly, institutions still house abandoned children, even though the Saudi Ministry of Human Resources and Social Development is working to move all children towards family-based alternatives (e.g., foster care and cuddling) (see Chapter Three). Given that some children still reside in institutions, there is some pressure to understand

their needs and improve their environment to promote positive developmental outcomes. Secondly, Saudi studies have not thoroughly investigated attachment relationship between groups, including typically developing children, cuddled, and institutionalised children. Lastly, a small number of studies exploring psychosocial development in the cuddling care setting did not consider certain key factors, such as early placement. The available data assessed the social and behavioural aspects of children in institutional care (e.g., Al Attas, 2013; Al Fayez, 2010; Alrasheed & Al-Dhahyan, 2007).

The programme of work presented in this thesis aims to address these gaps in the literature, to explore the attachment and psychosocial aspects of two groups living with non-biological parents (those living in institutions or with adoptive families), and to compare their outcomes with a group of children living with their biological parents.

3 Chapter Three: Institutional Care for Abandoned Children: The Saudi Arabian Situation

3.1 Introduction

Institutional or residential care settings are often the only service available to authorities and professionals concerned with placing children in a new living situation (Cook & Cook, 2019). While over 190 countries have signed the United Nations guidelines that emphasise providing children who live in alternative care with an "appropriate and permanent solution" (United Nations, 1990; 2010, p. 2), initiatives to meet these guidelines vary from country to country. There has been an increased decline in institutional care, globally. This stems from negative reports of children's institutional experiences after the Second World War starting in the 1950s (e.g., Bowlby, 1952; Pringle & Tanner, 1958). Following this, a number of longitudinal projects were conducted in East Europe by the English and Romanian Adoptee (ERA) project (Rutter & the English and Romanian Adoptees (ERA) study team, 1998), the Bucharest Early Intervention Project (BEIP) (Zeanah et al., 2003; Zeanah et al., 2005), the Russian orphanages (The St. Petersburg-USA Orphanage Research Team, 2005), and various other projects which highlighted how early deprivation could cause damage to children.

Several studies have described the global state of institutional environments (Groark et al., 2005; Groark et al., 2011; Stark et al., 2017; The St. Petersburg-USA Orphanage Research Team, 2005; United Nations, 2010). These reports include accounts of different challenges that have resulted in institutional care being labelled as inadequate (Berridge et al., 2012). For example, institutional care for children tends to be marred by a lack of opportunities that promote a healthy lifestyle. Van IJzendoorn et al. (2011, p. 4) stated that residential care is mostly characterised by "structural neglect", where the facility does not provide an acceptable level of physical resources, staffing patterns, or adequate social and emotional interaction between caregivers and children. Moreover, the review outlines that group sizes tend to be large (9-16 children per ward), and there are few caregivers; some facilities have one staff member per 30 children (Rutter et al., 2007).

Furthermore, due to conditions related to job stability and lengthy hours of work at institutions, children meet with different and ever-changing carers (Groark et al., 2011), or experience repeated separation (Vorria et al., 2003). The interaction between caregivers and children is another issue, with interactions often limited to the basics, such as feeding and personal care (Rutter et al., 2007).

However, not all institutional settings share the same negative environmental impacts (Forrester, 2008). In some countries, institutional care remains as one of the primary settings for children who do not live in a typical home. For instance, in Japan, 90% of children and adolescents aged between birth and 17 years that reside in alternative care live in residential care homes (Ainsworth & Thoburn, 2013). Furthermore, The Netherlands, Norway, Iceland, Finland and Sweden all report utilising this type of care and having the most successful institutional care outcomes for children and adolescents amongst all developed countries (UNICEF, 2013), Their success is suggested to reflect the experience of applying a structural change by increasing the use of a family-like model that concerns itself with prevention and intervention support for residents (Kääriälä & Hiilamo, 2017).

3.2 The Child Protection System in Saudi Arabia

Saudi Arabia's legal child protection system is new, having been approved in 2014 (Ministry of Justice, 2014). The system is designed to ensure that children in Saudi Arabia have access to education, nutrition, and social and emotional support. The system aims to protect children from abuse, including physical, social, and sexual activities that affect children and adolescents aged 18 or younger. It also seeks to prevent neglect, which can take an economic, emotional, or academic form. By promoting children's physical and mental health, as well as their feelings of security, this child care provision aims to protect the child from any harm they might experience in their surrounding environment (home, school, public place, adoptive or alternative family, or institutional care). The system requires children's agencies and organisations to adopt policies that protect children from deliberate abuse, discrimination, or other potential risk.

In this system, all children are entitled to receive full care and protection. The system emphasises the importance of a child having a typical home environment. Parental responsibility is, therefore, emphasised as the

first and most essential protection for the child. The government has a responsibility to ensure that parents fulfil their obligations and commitments towards children and adolescents in their care. In general, a child must not be separated from his or her parents if the parents do not consent. However, when an authorised party (such as the MHRSD) determines that such a separation is necessary to protect the child and safeguard his or her best interests, then a court order should be obtained as a matter of judicial separation.

The system stresses the importance of immediate relief for children who experience unsafe conditions (e.g., parental abuse, homelessness, abandonment). If the child is at risk, the government, through the MHRSD, is responsible for ensuring that they are mentally, psychologically, and physically safe. Alternative care is the first refuge for those children who are not able to live with their birth families. Typically, care systems encourage the placing of a child with adult relatives if possible. For children who have unknown parents, unclear places of residence, or who cannot live with their biological families because of violence or maltreatment and have no relatives who can provide care, alternative care is provided until the child's situation has been stabilised.

Alternative care settings include placing the child with non-biological families (adoption or foster) and institutional care. This new living environment should ensure that children have access to education, healthcare, and proper nutrition. If a child experiences difficulties in alternative care (e.g., violence, neglect, abuse, deprivation), then they are removed and placed in a safer care setting. Typically, children in alternative care stay until they have reached the age at which they would be able to get a job (for males) or until they are engaged to be married (for females).

This system requires that individuals who work with children have the proper qualifications to do so. Thus, the legal system requires that they be given access to training programmes. The MHRSD, or another governmental, charitable or social welfare institution, should set up programmes that prepare people who work with children (i.e., employees, adoptive or foster parents, and carers) to be capable of acting according to the standards set out by the law. Programmes include official training in the form of seminars and

meetings that give carers a better understanding of the problems and difficulties they may face when dealing with alternative care residents.

3.3 Steps to Move Institutionalised Children to a Family-Based Alternative

Recent policy developments (MHRSD, 2018) discourage the placing of children who were abandoned or could not stay with their families into institutional care, which is not a family setting. In light of this policy, the MHRSD launched a programme called "Social Houses", which seeks to integrate institutionalised children with the community by moving them from institutions into typical houses outside the institutions where permanent and stable caregiving is provided. This policy represents a version of foster care that has been modified to fit into Saudi society. The programme addresses institutional residents of all ages (children, adolescents, and adults), though it takes into consideration children's distinct needs based on their age. In this model, children live in houses designed to be like those of a nuclear family. These houses are not only for institutional residents, but also for children whose primary carers might be in prison, hospitalised, or deceased.

The Social Houses programme provides children with a family and at least one primary carer (usually a mother). The number of residents in each home is not permitted to exceed seven, including the group's "parents." Each house has four bedrooms, a lounge area, a kitchen, and a recreational space. Each bedroom takes two or three children. In addition, houses provide physical and psychological services. In the first phase of the programme, over 900 children and adolescents are projected to be in 165 houses in 13 cities by the end of 2020. It is not yet clear whether these houses will be organised according to factors like children's health or gender.

3.4 Institutional Care for Abandoned Children in Saudi Arabia

According to the Saudi General Authority for Statistics (2016), Saudi Arabia has 138 institutions that take four different forms; (1) Juvenile care homes, which aim to manage delinquency in the young population; (2) social protection for children who need urgent care in the face of domestic violence; and (3) Comprehensive Rehabilitation Centres for disabled children. In

addition, (4) one institutional care type is for orphans with special circumstances (unknown parents). There are 25 institutions (representing 18% of institutions) across 13 provinces in Saudi Arabia that provide long-term institutional care for children unable to live with their birth parents, usually due to abandonment soon after birth, parents' death, or inability of the primary carer.

Empirical evidence to explain why some children are abandoned in Saudi Arabia is not available. It is evident, however, that parents do not leave their children solely due to poverty or homelessness. Illegitimacy may be one reason (Gibbons, 2005), but more research is needed to understand the full range of reasons why children are abandoned in Saudi Arabia. Typically, abandoned children live in residential care until adulthood, when they can choose to stay or leave the institution. Due to the government's commitment to reducing the number of institutional residents, younger children are usually taken out of these facilities and put into early cuddling.

According to the MHRSD (2017), institutional care can be categorised into two main types. The first is designed to be a *home-based institution* (HBI), designed to simulate life with a family. In this case, children are housed within small houses or flats within a larger institution, where they can meet other children from different homes within the same institution, but live separately. Children are placed into two- or three-bedroom homes or flats with a few children and primary carers. Children have their meals and do their schoolwork at home. In this care type, a stable caregiving pattern, with children meeting only a few number of caregivers, is emphasised. HBI normally hosts 10-year-old children and younger boys, while girls are there from birth and stay until adulthood, when they either marry or choose to leave.

The other type is the *ward-based institution* (WBI). Here, many children are typically placed together in one ward. Each ward consists of one or two spacious rooms. All the facilities, including the kitchen, dining room and other amenities, are shared. Multiple caregivers usually work in rotation shifts. There are 16 such institutions across the country, accepting children between 10-18 years of age, who are either transferred from HBI, or have lost their parents and are not able to live with relatives. This care type is usually for single gender residents, mostly boys. When a child reaches 18 years of

age, they have the choice to stay or leave. If the care residents, either boys or girls, do choose to leave care, the MHRSD continues to support them.

3.5 Current Status of Institutional Care Provision in Saudi-Arabia (the context of the current study)

Few studies have explored the institutional care environment in the Middle East. A variety of institutional care settings exist in Saudi Arabia for abandoned children. This chapter considered a number of variables to characterise institutional care, including the number of children living in the institutions, the children's age and gender, and the type of resources available at these facilities. In addition, it explored opportunities for children to learn daily life skills (e.g., solving school problems, handling budgeting, shopping, or social activities), and the general nature of caregiving (e.g., the number of staff at a given facility, how the carers are selected, and how they behave). This study is based on a survey of heads of institutions and psychologists working in 12 (/25) Saudi institutions hosting abandoned children. It is important to note that this study was not intended to quantitatively assess institutional care in Saudi Arabia. Rather, the information gathered through the survey was used to describe the settings and provision in Saudi Arabia, and to provide context for the present research.

3.6 Aims and Objectives of the Current Study

This study aimed to provide descriptive data on institutional care in Saudi Arabia. Its focus is on institutional care for children who cannot live with their biological parents due to issues such as abandonment, deceased parents, or the inability of the primary carer to provide for the child. This study was guided by the following objectives:

1- To describe the policies and structure of institutional care (placement polices, movement of institutionalised children, number of children, number of institutional facilities, staff and caregiver numbers, and nature of work);

2- to outline the programmes and services aimed at addressing school problems, daily life skills, and social and emotional development;

3- to capture the staff and caregivers' nature (behaviour, training, and self-development).

As this study aimed to describe the nature of institutional care in Saudi Arabia, no directional hypotheses were made.

3.7 Method

3.7.1 Ethics

Before conducting this study, an approval from the Ethics and Research Governance committees at the University of Southampton, and the Saudi Ministry of Human Resources and Social Development were obtained. All participants read the study information explaining the purpose of the study before responding to the questions and they consented to take part in the study.

3.7.2 Participants

Heads and psychologists working at institutions were asked to complete the survey. The MHRSD sent an email with a survey link to all heads and psychologists employed across the 25 institutions that provide care for abandoned children. The total number of participants who completed the survey were N = 23: 11 heads (N = 7 females) and 12 psychologists (N = 8 females) working at 12 institutions (48% of the total number of Saudi Arabian institutions for this group of children). Of these institutions, N = 5 were HBI and N = 7 were WBI. The results are presented separately across institution type.

3.7.3 Measure development – the Saudi Institutional Environment Survey

The survey in the current study was developed based on existing literature concerning the ecology of institutional care, and on previous studies that described the institutional environment globally (e.g., Hart et al., 2015; Groark et al., 2005; Groark et al., 2011; Stark et al., 2017; United Nations, 2010; van IJzendoorn et al., 2011; Zhang et al., 2018). The survey aimed to capture principles that focus on the child as a whole, the level of caregiving from those inhabiting the child's space, and training that promotes the daily life and activities of both children and carers (Petrie, 2006).

The current survey focused on three main elements of care: (1) A narrative description of the policy and structure of the care. This section

included a description of the policy of institutional care (i.e., the anticipated length of stay, the nature of the accommodation, the number and gender of children (as well as specific needs), the general facilities, and the number and selection criteria for caregivers). (2) Questions that focused on child respondents, describing the frequency of opportunity for children and adolescents to address school demands, develop practical life skills, and foster emotional and social development. (3) Questions that focused on the staff and caregivers. In particular, these questions considered: (i) how the caregivers' behaviours; and (ii) the frequency of the formal and informal opportunities for training and self-development (see Appendix A.1).

To explore element (2) – opportunities within the institution for children and adolescents – respondents were asked to indicate the level of frequency from "never" (1) to "all the time" (4) for questions related to how children obtain help addressing school problems (i.e., in group classes, in individual classes, and by themselves); the development of practical skills (e.g., learning about budgeting, health and safety, shopping); and social and emotional skills (e.g., planned programmes and activities that support making connections and communicating with others), opportunities to take part in activities that allow children to develop social and emotional skills and how often children engage in activities that bring people to institutions or take children into the community (e.g., children visiting friends or peers from school).

To explore factor (3) – (i) to capture the nature of caregivers behaviours (whether or not emphasising family-like behaviour) – twenty items were placed on a five-point Likert scale, scoring "1" for strongly disagree to "5" for strongly agree, aimed at understanding opinions on statements that capture caregiving (e.g., "caregivers form supportive relationships with children", "caregivers spend time with children talking and listening"). Ten of these items were included in the analysis, as they showed appropriate reliability. (ii) Seven items were included that related to the perceived frequency of opportunity (from "never" (1) to "all the time" (4)) for formal and informal staff opportunities for training and self-development; three items were concerned with more formal training (e.g., children's well-being and resiliency), and four items related to opportunities to learn from each other (e.g., problem solving).

3.7.4 Approach to analysis

With the aim of providing a description of institutional care, descriptive data was obtained (number, percentage, mean and standard deviation), based on institutional design for policy, structure of care, and addressing school problems and daily life skills[1]. For social and emotional development, the mean of each participant was calculated. The means were then rounded to the nearest whole number to reflect the survey categories ('never', 'occasionally', 'frequently', 'all the time'). Next, the percentage of samples with a mean similar to the Likert categories (e.g., 4 = 'all the time') was reported. Descriptive data about the respondents, and for items based on care design, were also presented in a table. For caregiver behaviours, descriptive data, along with the percentage of agreement (respondents who chose either 'agree' or 'strongly agree' from the survey) were reported for each item included in the analysis. This was to capture behaviours for further clarification. The percentage of the sample that had a mean similar to the Likert categories (e.g., 4 = 'all the time') was reported for formal and informal staff opportunities for training and self-development.

3.8 Results

3.8.1 Structure and Policy of Care

Accommodation

Both types of institutional care setting reported that they provide children with permanent residence. Three institutions (N = 1 and N = 2, HBI and WBI respectively) also noted that they provide temporary accommodation until the child is placed in proper care. Eight institutions (HBI: N = 3; WBI: N = 5) reported that they place children of different ages together. The only consideration for particular age groups being placed together was for newborn children, as reported by respondents. Three HBIs reported that they place both genders together. All 12 institutions reported placing children who have special health conditions (e.g., physical disabilities, long-standing illnesses like diabetes) with other children, irrespective of their health condition.

[1] The numbers captured the highest frequency of action taken by institutions to manage these aspects.

Movement of institutionalised children

Heads and psychologists were asked to indicate the criteria they use when making decisions about moving children and adolescents from one institution to another, or from one department within the institution to another; eight institutions indicated that the main reason was age. Other criteria associated with transferring children to another institution or department within the same institution are presented in Table 3-1.

Table 3-1

The number and percentage of all move criteria amongst Saudi institutions

Move Criteria	HBI	WBI	All Institutions
	N	*N*	*N* (%)
Age	3	5	8 (66.60)
Request to move	2	5	7 (58.30)
Child behaviour	2	2	4 (33.30)
Relationships with carers	1	2	3 (25.00)
Gender	1	1	2 (16.60)
Relationships with other children	1	1	2 (16.60)

Number of children

Table 3-2 shows the number of children across institution types, the number of children in each home/ward, and the number of children who share a room based on the institutional design. The results indicate some variation in the number of children.

Table 3-2

The total number of children in each home/ward and children sharing a room

	Type of institution		Total
	HBI	WBI	
Number of children			
1-10	0	2	2
11-20	3	2	5
21-30	1	1	2
30+	1	2	3
Number of children in home/ward			
1-5	5	4	9
6-10	0	3	3

11-15	0	0	0
15+	0	0	0
Number of children sharing a room			
1-2	5	3	8
3-4	0	2	2
5-6	0	1	1
6+	0	1	1

Institutional facilities

Participants were asked to tick all facilities that were applicable to the institution where they work. Table 3-3 presents the facilities provided to children.

Table 3-3

The number of physical facilities provided across the 12 institutions

Institutional facilities	HBI	WBI	All institutions
	N	*N*	*N*
Well-lit rooms and common areas	5	7	12
Bed and wardrobes	5	7	12
Dining room	5	6	11
Classrooms	3	4	7
Space for training	4	6	10
Free access to play area with toys	5	7	12
Free access to computers and internet	3	6	9
Free access to the library	3	4	7
Free access to arts and crafts tools	3	5	8
Free access to the recreational activity room	3	6	9
Free access to TV	5	7	12

Staff and caregiver

The number of staff members and caregivers varied across the 12 institutions, with a mean staff number of 88.92 (*SD* = 60.52; HBI: *M* = 82.60,

SD = 52.77; WBI: *M* = 93.43, *SD* = 69.29) and median of 66 (HBI: *Mdn* = 45; WBI: *Mdn* = 88) ranging from 19 to 194 staff members and caregivers. In eight of the institutions surveyed (75%), the primary carers were female. All five HBIs reported one to three caregivers per home, while five of the seven WBIs have between four and six caregivers per ward. Staff in HBIs work 7-8 hours per day in four institutions; one reported a rotating shift pattern of 9-16 hours. In the WBIs, staff work 7-8 hours per day across four institutions, were residential in two of the institutions, and work 9-16 hours in the remaining institution. The most important caregiver and staff selection criteria, across nine institutions, was found to be an educational qualification (WBI: *N* = 6). Other selection criteria, in seven institutions, were gender, age, professional training qualifications and previous work experience. All institutions have one head and at least one psychologist.

3.8.2 Addressing school problems, daily life skills, and social and emotional development

The survey presented three items for addressing school problems, six items for daily life skills, and nine items for social and emotional development. In the results regarding residency type, group classes appeared to be used in eight institutions (HBI: N = 4) occasionally, and a further eight institutions (WBIs: N = 5) using individual classes frequently. Six institutions reported children occasionally handling school problems by themselves (WBIs: N = 4). Practical life skills were frequent across both types. Nine institutions teach children about personal care (WBIs: N = 6), seven about health and safety (WBIs: N = 5), seven about shopping (WBIs: N = 5), six about how to tidy their rooms (WBIs: N = 4), and five about budgeting (WBIs: N = 4).

Of the total sample, 35% of the total respondents reported taking care of social and emotional development all the time, 52% frequently, and the remaining 13% only occasionally. When looking at the results for care design, over 66% of HBIs, and all WBI participants reported that institutions were enhancing social and emotional skills either frequently or all the time. Over 70% of heads reported that institutions frequently consider social and emotional development. However, data from psychologists showed similar results for the ‘all the time’, ‘frequent’ and ‘occasional’ categories, with 33.33% for each. Table 3-4 presents descriptive data for the social and emotional development items on the questionnaire.

Table 3-4

Descriptive data (mean = M; standard deviation = SD; and median Mdn) for social and emotional skills) for all participants, heads and psychologists

	HBI *M* (*SD*) *Mdn*	WBI *M* (*SD*) *Mdn*	Heads *M (SD)* *Mdn*	Psychologists *M (SD)* *Mdn*	All participants *M* (*SD*) *Mdn*
Children gain social and emotional skills through					
Conversations with carers/ staff	3.56 (.88) 4.00	3.07 (1.14) 3.00	3.27 (1.01) 4.00	3.25 (1.14) 4.00	3.26 (1.05) 4.00
Conversations with peers/ friends	3.00 (1.11) 3.00	3.50 (.76) 4.00	3.36 (.81) 4.00	3.25 (1.06) 4.00	3.30 (.92) 4.00
Planned programmes	2.89 (1.05) 3.00	3.57 (.64) 4.00	3.09 (.94) 3.00	3.50 (.80) 4.00	3.30 (.87) 4.00
Children have the opportunity to take part in activities that allow them to					
Develop social and emotional skills (e.g., fostering friendships)	3.00 (1.00) 3.00	3.57 (.75) 4.00	3.45 (.82) 4.00	3.25 (.97) 3.50	3.35 (.88) 4.00
Engage with carers and staff (e.g., playing together).	2.67 (.86) 2.00	3.07 (1.14) 4.00	3.00 (1.00) 3.00	2.83 (1.11) 2.50	2.91 (1.04) 3.00
How often children engage in activities that bring people to the institution or that take the children into the community					
Children invite friends/ peers from school	2.78 (1.09) 2.50	3.07 (.82) 3.00	2.91 (.94) 3.00	3.00 (.95) 3.00	2.96 (.92) 3.00
Children visit friends/ peers from school	2.33 (1.11) 2.00	2.93 (.82) 3.00	2.73 (.79) 3.00	2.67 (1.15) 2.50	2.70 (.97) 3.00
Children plan activities in the community (e.g. schools)	2.78 (.83) 2.50	3.21 (.89) 4.00	3.09 (.83) 3.00	3.00 (.95) 3.00	3.04 (.87) 3.00
Children participate in activities in the community (e.g. schools)	2.89 (.78) 3.00	3.57 (.75) 4.00	3.36 (.81) 4.00	3.25 (.87) 3.50	3.30 (.82) 4.00

* Numbers reflecting the survey categories are 1 = never; 2 = occasionally; 3 = frequently; 4 = all the time

3.8.3 Staff and Caregivers

Caregivers' behaviours

Survey items included to capture caregivers' behaviour in institutional care, for participants across both employee categories, are presented in table 3-5.

Training

Regarding opportunities for training and self-development, the results showed that employees in four institutions (WBI: N = 2; Heads: N = 2) reported that employees were given the opportunity for training every six months; nine (WBI: N = 6; Heads: N = 5) reported that staff members receive training once a year; while nine participants reported that it is based on availability. Almost 52% of participants across both types of employee showed that the formal training provided is either occasionally or not at all related to their job role, while the remaining percentage perceived it to be frequently related. 55% of HBIs and 36% of WBIs perceived training to be frequently relevant to their role. In terms of opportunities to learn from each other, 43% reported that they make use of these meetings frequently, 30% all the time, and 27% occasionally. When looking at results based on care design, for formal training, 55% of HBIs take advantage of meetings either all the time or frequently, compared to 86% of WBIs.

Table 3-5

Descriptive data (mean; standard deviation = SD; range, and percentage of agreement with each statement) for the caregivers' behaviour based on heads and psychologists' ratings in both HBIs and WBIs

			Caregivers and staff do paperwork anywhere (e.g.at the kitchen table)	Caregivers always try to follow procedures	Caregivers only work to fulfil the basic demands (e.g. feeding, cleaning)	Caregivers look after younger children most of the time	Caregivers spend time reading with children	Caregivers have at least one daily meal with children	Caregivers spend time with children listening and talking	Caregivers form supportive relationships with children	Caregiving style emphasizes psychosocial development	Caregivers display positive emotions with children
Heads	HBI	Mean	2.00	3.00	2.25	3.25	3.25	4.00	4.50	3.75	4.00	4.50
		SD	1.41	1.41	1.25	.95	.95	1.41	.57	.95	.81	.57
		Range	1-4	2-5	1-4	2-4	2-4	2-5	4-5	3-5	3-5	4-5
		Percentage	50%	25%	25%	50%	50%	75%	100%	50%	75%	100%
	WBI	Mean	1.43	3.00	1.43	2.86	3.14	4.43	4.43	4.14	4.29	4.71
		SD	.78	1.29	.78	1.21	.90	.78	.53	.70	.75	.48
		Range	1-3	1-4	1-3	1-4	2-4	3-5	4-5	3-5	3-5	45
		Percentage	0%	57.1%	0%	43%	43%	86%	100%	86%	86%	100%
Psychologists	HBI	Mean	2.40	3.20	1.40	3.40	3.20	3.00	4.60	4.60	5.00	4.80
		SD	1.95	1.64	.55	.89	1.10	1.87	.55	.55	.00	.45
		Range	1-5	1-5	1-2	2-4	2-4	1-5	4-5	4-5	5	4-5
		Percentage	40 %	60%	0%	60%	60%	60%	100%	100%	100%	100%
	WBI	Mean	1.86	3.00	1.86	3.71	2.29	3.57	4.29	4.14	4.71	4.43
		SD	1.21	.57	1.07	.75	1.11	1.27	.48	.70	.48	.53
		Range	1-4	2-4	1-4	3-5	1-4	2-5	4-5	3-5	4-5	4-5
		Percentage	14.3 %	14.3%	14.3%	57.1%	14.3%	57.1%	100%	86%	100%	100%

* Items presented to capture the nature of the caregivers' behaviours (whether or not reflecting a family-like behaviour) based on how heads and psychologists working in institutions perceive them on a five-point-Likert scale: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree.

**The agreement was calculated for responses that agreed or strongly agreed with each statement.

3.9 Discussion

The aim of Chapter 3 was to provide insight into the current workings of institutional care in Saudi Arabia for children who cannot live with birth parents. The description of the institutional environment was based on a survey of 23 heads and psychologists working in 12 institutions under the supervision of the Ministry of Human Resources and Social Development (MHRSD). The survey was developed to give a description of institutional care based on the existing literature and studies that described the ecology of institutional care globally. Two primary types of institutional care exist, if defined based on their design: home-based institutions (HBI) and ward-based institutions (WBI).

3.9.1 Policy and Structure of Care

The results showed that both types provide long-term residency, and a few institutions also provide short-term residency. In contrast to what was reported in Groark et al. (2011) and Van IJzendoorn et al.'s (2011) studies, and consistent with Tizard and Rees' (1975) study, most Saudi institutions tend to place children of different ages together. Newborn and young children are only the exception from this policy since they need special care. In addition to age, children with special consideration like health issues or disability are placed together with other children. A possible explanation would be that the number of children who need or do not need special care in each institution is small. Three institutions were found to mix gender. In some comments on the survey, it was stated that it is useful for institutions to have boys and girls co-habiting; conversely, others think that it is best for them to live apart. The existence of gender mixture and separation was found in some countries, such as Chile (Julian et al., 2019). However, there is a lack of gender-specific guidance that looks at the effect of single- or mixed-gender institutional care for young people, as both exist (Copley & Johnson, 2014).

A review of the literature showed that most institutionalised children have experienced at least one move from one institution (Cook & Cook, 2019; Fisher, 2015). Therefore, it is worth asking what criteria Saudi institutions use when deciding to move a child. The survey asked heads and psychologists to indicate all criteria used when making decisions regarding the move of a child from one institution to another. Across institutions, the most common criteria

used to determine whether children will move from one setting to another were the child's age, and a request to move. The age criterion is consistent with what is reported worldwide once the child reaches a developmental milestone (Groark et al., 2011; McCall, 2013). In Saudi institutions, the child's age when being moved is related to gender. As reported by the participants, boys are usually transferred to another institution when they turn 10 years old. On the other hand, there is a lack of clarity regarding move-request procedures, even in the child protection system. Aside from those points of overlap, the institutions surveyed varied considerably in terms of highlighting factors that prompted a move for the child. In addition to gender, further criteria included child behaviour and relationships with carers or other children.

The number of total children varied between institutions; almost all housed 11 children or more; some housed more than 30. Most HBIs were reported to have up to 20 children, however, this number is unusual when compared with previous research outlining that institutions are more likely to have a large number of children (Rosas & McCall, 2009, cited in Groark et al., 2011). The survey suggests that the smaller number of children in many institutions can be attributed to the new Saudi policy to shut down this type of care in the near future, and place all newborn children into adoption or foster care (cuddling agencies or social houses). The small number of residents can be an advantage, as the children are more likely to have the opportunity to form attachment relationships with specific adults, compared to those who live in a large group homes (Bakermans-Kranenburg et al., 2011; Johnson et al., 2006).

At a national level, the most common policy is to place five children per home/ward, which is below the norm of typical institutions where there are, on average, 9-16 children per ward (McCall, 2013; van IJzendoorn et al., 2011). In practice, if rooms are available, HBIs tend to assign two children to a room. On the other hand, however, many WBIs have three children assigned to a room and, sometimes, up to six. The number of children in each room is likely also to be related to the number of children living there. Still, the number is below the worldwide norm, as institutions tend to have one large room housing many children together (Smyke et al., 2002).

Almost all the surveyed institutions provided the most necessary elements of proper physical conditions for children, according to the heads and psychologists questioned in the present study. The literature more broadly has reported variation in the institutional physical environment, with some institutions providing adequate physical conditions, and others providing harsh physical environments (see Marcovitch et al., 1997; McCall, 2013). The most important features, including good lighting and common areas, a bed and wardrobes, access to a play area with toys, and access to a living room with a television, were reported in all 12 institutions. Other amenities, including training facilities and access to computers and the internet, were available in the majority of institutions. Most institutions reported that children had access to areas for participation in arts and crafts, and entertainment spaces for group activities, such as parties and games. In addition, children have access to outdoor areas, such as playgrounds and gardens. Seven institutions (58% of the total) also reported a library and multiple classrooms, which might give an explanation as to why some institutions rely on individual classes to manage school difficulties.

Although institutional care is characterised by having a small number of adult staff globally (Browne, 2017), the number of employees differs in Saudi institutions; from 19 in some institutions up to 200 in others (this figure includes all staff members and primary caregivers). There is no link between the number of employees and the number of children living in the institution. The link seems possibly related to institutional design, as the results showed higher numbers of employees in WBIs. Most primary caregivers were female, which corresponds to literature (Vorria et al., 2003).

With regard to the number of caregivers employed, between one and three consistent caregiver(s) work for one home in HBIs. This number was lower compared to caregivers in the intervention used for Romanian institutionalised children (Smyke et al., 2002). In the previous study, the intervention group had four consistent caregivers with a small group of 10-12 children. The current result, however, may resemble that of the intervention of the St. Petersburg-USA Orphanage Research Team (2008), which assigned two primary caregivers with a limited number of children. Another finding from the current study was that over 70% of WBIs had four to six caregivers per ward, which may indicate similarities to previous studies which found that institutionalised children are exposed to multiple caregivers (e.g., Groark et

al., 2011). Although the number of caregivers per home/ward varied for different institutional types, in general, the number of children per caregiver seems to be low, as most institutions reported no more than five children per home/ward, which could also reflect a low carer-child ratio.

Most employees, including caregivers, work 7-8 hours a day. Two institutions apply a shift-care system, where carers work for 9-16 hours and then take a day or more off; it represents a small portion of the institutional care surveyed, and may be a way to reduce understaffing. Even though the rotating shift exists in Saudi institutional care, the working hours are fewer and more consistent compared to institutions in other countries (e.g., 24 hours at a time, or inconsistent shift lengths, with 8 hours one day and 16 hours the next (Bakermans-Kranenburg et al., 2011; Groark et al., 2011). Four HBIs applied the former pattern of working hours, which explains the carer number per home and reflects a pattern of stability (Groark et al., 2005).

The most important criterion for caregiver selection, across nine institutions (WBI: N = 6), was an educational qualification consistent with the Saudi child protection system. Gender, age, professional training qualifications and previous work experience were found to be other important selection criteria for seven institutions; this is since all institutional care staff members are recruited via the Ministry of Civil Service, as stated by the participants.

3.9.2 Addressing school problems, daily life skills, and social and emotional development

Since Saudi Arabia has no boarding schools, all children go to day schools. Some children go to public or private schools that address special needs (e.g., disabilities), or provide more care (e.g., for children diagnosed with an autism spectrum disorder). According to the heads' and psychologists' responses, institutions differ in how they manage school demands, despite being governed by the same body (the MHRSD). Most institutions reported offering classes to help children address school-related problems. Within most Saudi HBIs and WBIs, individual classes are commonly used to help children manage academic difficulties, perhaps because their focus is on children who have academic weaknesses, and 40% of the institutions lack the facilities required to teach children in group classes. Few institutions take advantage of group classes, and both types occasionally

leave children to deal with academic difficulties on their own, although it is unclear how this happens.

It is important to provide young people with essential life skills (Cullinane & Montacute, 2017). Programmes that help children to acquire and develop these are provided frequently, with a tiny variation between the two types of institution. Respondents reported teaching these skills (e.g., tidying rooms, personal care, health and safety, and shopping) to children usually in both dedicated and practical classes, and there are occasional opportunities to learn other skills like budgeting and preparing food. The aim of such programmes is to help children take more charge of their everyday lives.

Since institutional care is marked by a lack of these core elements, some authors argue that children who stay at least six months in institutional care after birth would show less developed emotional capacity (Batki, 2017, Schoenmaker et al., 2014). It is thus worth looking at the availability of services and programmes that promote social and emotional development. Over 80% of participants reported that institutions do consider children's social and emotional development. However, WBIs seem to make more use of these opportunities than HBIs, possibly because of the psychologists' perception that HBIs only occasionally promote social and emotional programmes. The mean scores of individual items showed that HBIs focus more on carer-child interaction, which might reflect the influence of care design, and which allows children to thrive socially and emotionally in more normal ways. This is supported by their housing small numbers of children in small units, with consistent caregivers. The WBIs, on the contrary, emphasise development of social and emotional skills through planned programmes and activities with peers and friends. This was obvious from the higher means of frequency of planned programmes in the survey, such as "children participate in activities in the community (e.g. schools)".

3.9.3 Staff and Caregivers behaviours and training

This section is related to understanding the caregiver-child relationship, which is a core element of the project. Interventions into caregivers' behaviour and training were found to be the most effective of all interventions implemented in institutional care (Julian et al., 2019). These behavioural interventions encourage the carer to be sensitive, warm, and responsive (van IJzendoorn et al., 2011). The mean scores and the level of agreement with

statements showed some variation in regard to carer's behaviour based on participants and care design. Some responses indicated that carers show warmth and closeness to children by talking and listening, forming supportive relationships, emphasising psychosocial development, and displaying positive emotions with them. On the other hand, carers do not act to carry out their day-to-day tasks at home and work as the typical family does, but rather are confined to the fulfilment of basic demands. Some interventional programmes promote the family-like structure based on, for example, social pedagogy, by establishing a sense of homeliness by having carers behave as though they are home with their own children (Hart et al., 2015; Petrie, 2006). Caregivers in the current study seemed inclined to rely on behaviours that are simple and straightforward, rather than those that are more complex or require more effort. In addition, there is the possibility of respondents being unable to capture the caregivers' behaviours due to there being multiple caregivers, or that the questions posed to participants need more clarification.

The opportunities for training available to employees in institutions, as reported by heads and psychologists, were low, representing little training. Despite the fact that the Saudi child protection system governs training for all employees in alternative care, almost 80% of participants reported taking training opportunities either once a year, or when they were available, which indicates a lack of prospects; this could not be due to a lack of caregiving staff members. These results are consistent with those observed in earlier studies and reports that demonstrated a lack of training opportunities for institutional staff (Browne, 2017; Groark et al., 2011; Hart et al., 2015). Moreover, staff in WBIs' reported that they did not receive proper training related to professional caregiving, such as opportunities to develop professional caregiving, children's mental health, or skills that would further enhance their employability, as well as their own mental health. However, staff of both institutional types appear to compensate for this lack of formal training by meeting with colleagues. These meetings may help employees share information and experiences in problem-solving and building teams. Notably, WBIs benefit the most from such meetings, as they more frequently share knowledge on how to learn from mistakes, build teams, and solve problems. It is possible that WBI staff are able to balance their lack of formal training through attending these meetings.

3.10 Limitations

This study's goal was to describe the current institutional care environment in Saudi Arabia for children who are not able to live with a biological parent(s) permanently due to abandonment or parental death, and to capture the nature of care for future studies. Hence, the analysis does not include all other types of institutional care in Saudi Arabia, such as juvenile care homes. In addition, this study did not provide an assessment of the quality of institutional care or the caregiving role. Rather, the evidence provided in the discussion section was intended to represent the current status of institutional care. Another limitation is that almost half of the institutions took part in this study, which therefore does not reflect a complete picture of institutional care for abandoned children.

3.11 Conclusion

The main aim of this study is to describe the institutional care of abandoned children by surveying heads and psychologists of institutional care settings in Saudi Arabia. It also highlights the Saudi child protection system and new programmes for institutionalised children. There are two main institutional types based on design: family-based and ward-based institutions. Age is found to be critical for child placement and movement. Both institutional designs show a proper level of physical environment. While staff and caregivers' working hours do not vary between the HBIs and most WBIs, the number of employees does. Institutions have different approaches for managing school problems, and to promoting social and emotional development. Results reported for caregiver behaviour and training show either some ambiguity or a lack of opportunities.

4 Chapter Four: Cross-Cultural Translation and Adaptation Process

4.1 Introduction

Psychometric properties demonstrate the statistical adequacy of an instrument in relation to its reliability and validity (Atkinson, 2001). Researchers typically use existing scales that have been widely reported to have good psychometric properties (Arafat et al., 2016). The use of scales cross-culturally can, however, raise issues with respect to their application in diverse contexts, and for both source and target versions of questionnaires (Sun & Jaya, 2010). Consequently, the cross-cultural adaptation of a scale requires that the source and target questionnaire versions are equivalent (Beaton et al., 2000). The focus is to ensure that a cross-cultural adaptation accurately measures what it was developed to measure (Sterie, 2019), and is psychometrically sound (Tsang et al., 2017).

The importance of cross-cultural translation and adaptation is that these scales undergo a tremendous process from the translation, through to synthesis, back translation, expert committee review, and pre-testing. Each step entails a rigorous translation and adaptation of scales to ensure the instrument is not only translated, but also adapted to the culture and language of the target population, while evaluating the same constructs tested in the original source (Beaton et al., 2000). The translation and adaptation of a scale should follow a comprehensive and integral process involving a recognised and standardised procedure (Sousa & Rojjanasrirat, 2011). In addition, once a questionnaire has been translated, scale validation represents an additional step for establishing the reliability and validity of the translated questionnaire in the target population (Tsang et al., 2017).

4.2 The translation and adaptation process

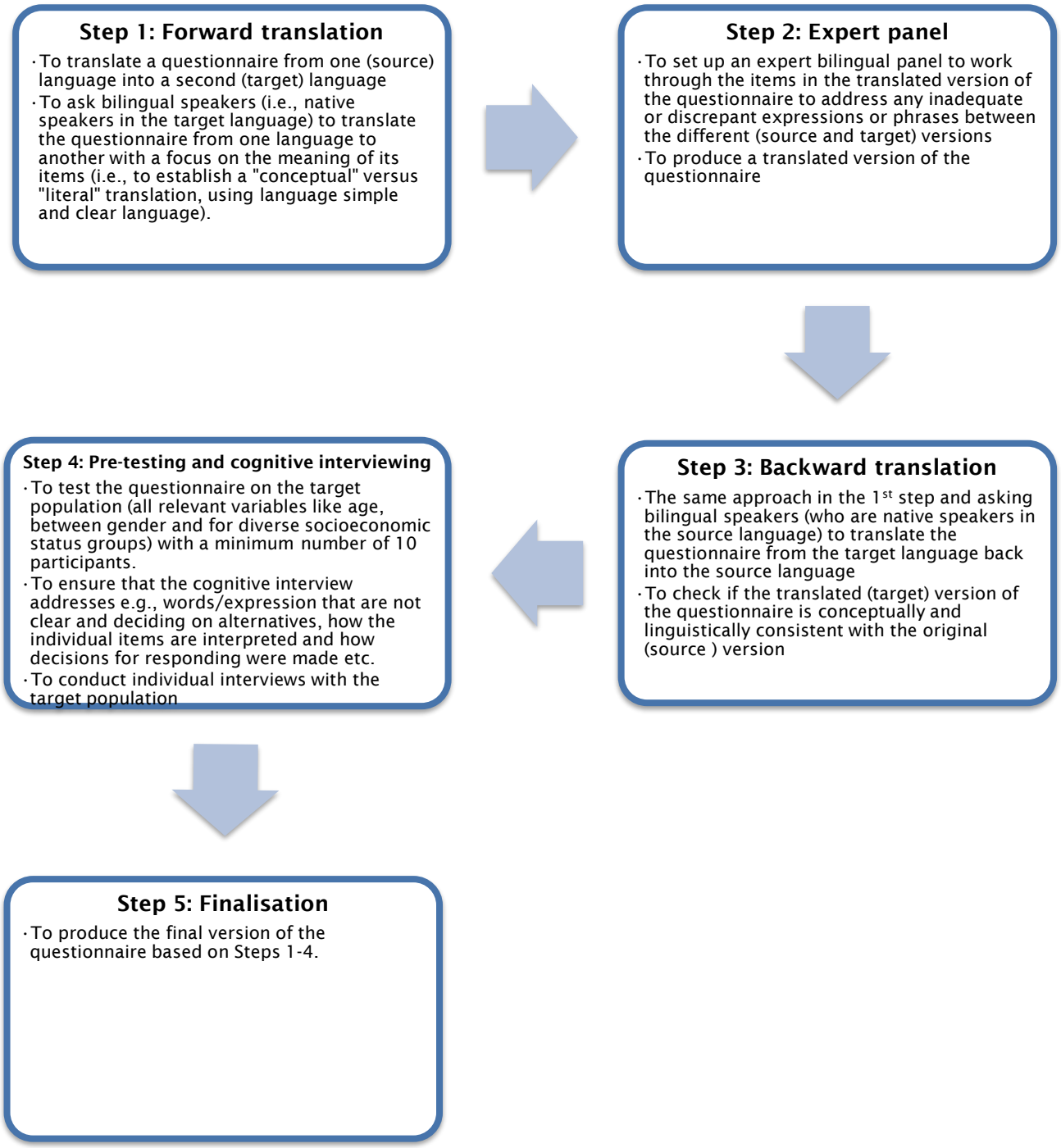
The translation is the process of producing a document from a source version into a target language (forward translation), following which the target language version is translated back to the source version (backward translation). Adaptation involves the consideration of the broader differences between the source and target cultures (Sterie, 2019). While translation is

solely about language, adaptation speaks more about the cultural context of the source and target languages. Tsang et al. (2017) proposed that qualified bilingual translators should translate the instruments into their mother tongue. They further suggested that translators should also be aware of the concepts/constructs that the questionnaire is intending to measure, and to ensure that they translate the material so that it closely resembles the original instrument. Cross-cultural adaptation is therefore used to incorporate "a process that looks at both language (translation) and cultural adaptation issues in the process of preparing a questionnaire for use in another setting" (Beaton et al., 2000, p. 3186).

Translation and adaptation uses various methods for different guidelines (Arafat et al., 2016; Beaton et al., 2000; Boateng et al., 2018; Sousa & Rojjanasrirat, 2011; Sterie, 2019; Sun & Jaya, 2010; Tsang et al., 2017). The World Health Organization (WHO) has proposed a standardised method for translating and adapting scales from English into other languages (WHO, 2010). The importance of this procedure comes from its frequent worldwide use, which gives it an advantage over other techniques. In addition, it outlines that the purpose of the process of translation and adaptation of instruments is to achieve different language versions of the (typically) English instruments that are conceptually equivalent in each of the target countries/cultures, with the aim that the instrument should practically operate in the same way. The WHO method is thus a cross-cultural and conceptual kind of translation and adaptation.

The World Health Organization's (WHO, 2010) processes were employed for translation and adaptation in this thesis, and to check the reliability and validity of the translated scales. The process involves five practical steps: the first three are (1) forward translation, (2) review by an expert panel, and (3) back translation. The fourth step is to test the translated versions in the target population, and the fifth is to produce a final questionnaire version (see Figure 4-1).

Figure 4-1. A summary of the World Health Organization framework (steps and key aims) for the translation of questionnaires from one language into another.



4.3 Aims and Objectives of the Current Study

This study translated two established scales from English into Arabic using the five-step procedure outlined in the WHO guidelines. In addition, it examined the validity and reliability of the translated scales. The first scale is the Loneliness and Social Dissatisfaction Scale (LSDS: Asher et al., 1984), which measures feelings of social integration, satisfaction, and social functioning. The scale was developed in English and has been translated into a number of other languages and adapted cross-culturally in several countries including Belgium, China, Germany, Greece, India, Italy, Korea, and Turkey (Demir & Tarhan, 2001; Maes et al., 2016).

The second scale translated and adapted for the present project was Harter's self-perception profile (SPP: Harter, 1985, 2012). The version used in this study comprised the following two sub-scales: social competence and global self-worth. The SPP has been translated and adapted into different languages and cultures like Arabic, Dutch, Greek, Portuguese, and Spanish (Broc, 2014; Eapen et al., 2000; Faria, 2001; Makris-Botsaris & Robinson, 1991; Van Dongen-Melman et al., 1993). Although it has been translated and adapted to Arabic (Eapen et al., 2000), the Arabic version of the scales could not be found. Thus, it was necessary to carry out the translation process to achieve an Arabic equivalent version.

4.4 Method

4.4.1 Ethics

Before starting the translation and adaptation process, permission was obtained from the authors (Asher, Harter) of both scales to translate and adapt them from English to Arabic. Further approval for this process was obtained from the Ethics and Research Governance committees at the University of Southampton, and the Saudi Ministry of Education.

4.4.2 Participants

To complete the forward translation process (Step 1), two translators were hired to translate the scales from English into Arabic. Step 2 (the expert panel) included three bilingual speakers with a degree in psychology, as well as a translator. For Step 3 (backward translation), two further translators were

hired to translate the scales back into English. In addition, two English native-speaking psychology students were asked to check both the original and back-translated versions. Step 4 recruited: 15 children (8 boys) aged 9-12 years old for the piloting test; three bilingual experts with a PhD degree in psychology to check the content validity; and 10 bilingual speakers to test the criterion validity. In addition, 136 typically developing children aged 8-12 years (mean age = 10.24, SD = 1.29, 69 boys) from (n = 4) Saudi primary schools were asked to complete the questionnaires as a representative sample. In this step, school counsellors helped collect data. After checking the individual responses (incomplete or invalid responses, scales with missing data as specified below), the final sample was 106 children (41 boys). Step 5 included the same 106 children reported in Step 4, who completed both the LSDS questionnaire and the two subscales of the SPP questionnaire.

4.4.3 Measures

The loneliness and social dissatisfaction scale (LSDS; Asher et al., 1984). This scale was designed for children aged 8-12 years. It includes 24 items, 16 of which measure feelings of loneliness, social adequacy and subjective estimations of peer relationships. Eight items are fillers that focus on children's hobbies or preferred activities. The children were asked to rate the extent to which they agreed with each statement (e.g. "I can find a friend when I need one") using a five-point Likert scale from 1 (not true at all) to 5 (always true) per item, generating a total score of 16-80. Six items are reverse coded. Higher scores indicated increased feelings of loneliness and social dissatisfaction. The Loneliness and Social Dissatisfaction Scale has been found to show excellent internal consistency (ranging from .87 to .90; Bagner et al., 2004).

The self-perception profile for children (Harter, 1985, 2012). This self-reported scale was designed for children aged 8-13, and comprises five subscales and a global self-worth subscale. Global self-worth measures the general perception of the self. Each of the five domains, and global self-worth, include six items that measure children's perception of their own scholastic, social, and athletic competence, as well as their physical appearance and general behaviour. The current study translated and adapted only the social competence and global self-worth sub-scales. In these two sub-scales children are asked to assess the extent to which they agree with each statement including social competence (e.g., "Some kids know how to make classmates

like them BUT other kids don't know how to make classmates like them"), and global self-worth (e.g., "Some kids like the kind of person they are BUT other kids often wish they were someone else"), on a scale of 1- 4, where 1 indicated lowest perceived self-judgment or self-adequacy, and 4 indicated the highest level of perceived self-judgment. Higher scores indicate greater perceptions of social self-competence and self-worth. The scores ranged from 6-24 for each subscale. The Self-Perception Profile for Children has been reported to be highly reliable and internally consistent (the social competence subscale ranging from .75 to .84; the Global Self-Worth subscale ranging from .78 to .87; Harter, 2012) in the US sample.

For missing data, a calculation of the mean for each child was used if there were no more than three items of LSDS and two items in each of the self-profile perception subscales missing, as stated in the source. Then, the child's scores for completed items were added together and divided by the total number of non-missing items to get an average.

4.4.4 Translation and adaptation process

To ensure that the translated versions were valid in the target culture, the World Health Organization's (WHO, 2010) method of translating and adaptation was used (see Figure 4-1).

Step 1 (forward translation): For step 1, an expert translator who was a native Arabic speaker with an English degree was hired to translate the questionnaires into Arabic. The translator was instructed to consider the meaning of each item and to use simple Arabic language when translating. To ensure that the Arabic version did not result in some inaccurate statements that might not capture the meaning, a second independent bilingual translator then checked the translated version against the source for any linguistic or conceptual errors, to prepare preliminary questionnaire versions for use in the following step.

Step 2 (Expert panel): This step asked three bilingual PhD students in psychology as a panel, and one professional translator, to review and compare the target (Arabic) version of the two questionnaires with the source versions, to make sure that the translations had retained the intended meaning. At this time, it was checked if two of the three panel members agreed that an item entirely, partly, or did not at all represent the original meaning. In addition,

the panel was asked if they could propose alternative phrasing or wording that could represent the meaning for items that did not represent the original statements. They suggested some modifications to the Arabic versions, based on language inaccuracy or the text being difficult to understand (item numbers 4, 6, 10, and 17 from the LSDS and 5, 8 and 9 from the SPP), and they also proposed alternative words. Then, the translator and researcher considered the proposed changes to produce a version for the next step.

Step 3 (Backward translation): Step 3 comprised two stages: (1) translating the Arabic versions back into English and (2) comparing the back-translated versions with the source versions. One different independent translator with an English degree was hired to translate the Arabic version back into English. This translation was then checked by another translator for linguistic or semantic mistakes. Two independent native English speakers, PhD psychology students who were not familiar with the questionnaires, were asked to compare both versions. They were asked to check for any errors or differences that might change the meanings between the versions. Through this process, some statements were identified as not reflecting the original English meaning (e.g., "I feel left out of things" where there is no exact synonym in Arabic). It was therefore reworded to represent a similar context (i.e., "I feel unwanted"). All items which were queried during this process were reviewed, and phrasings agreed by the English speakers were included in the Arabic versions to be piloted before the final version was submitted.

Step 4 (Pre-testing and cognitive interviewing): Step 4 tested the new versions of the questionnaires with the population they were intended for. A piloting test was conducted to check this new Arabic version before it was administered. Fifteen children (8 boys and 7 girls) aged 9-12 from primary schools in Saudi Arabia were asked if they were able to understand the statements in the translated questionnaires. In addition, the children were asked to indicate words or phrases for each statement they found difficult or unclear. N = 2 statements (item numbers 6 and 22) from the LSDS and 2 statements (item number 5 and 8) from the SPP were modified to reflect the children's feedback, and taking into account the meaning of the source. A further check was administered to look at the reliability and validity of the test in a large number of children. At this stage, the reliability was checked through internal consistency tests. Validity was examined using different types of tests.

Reliability and validity of the translated questionnaires

Internal consistency. The reliability was obtained from data of 106 Saudi children aged 8-12 years old with a mean of 10.24 and SD = 1.29 (65 girls) who completed the final versions of scales. The results showed that Arabic versions of both questionnaires were internally consistent with Cronbach alpha scores for each questionnaire > .7 (for LSDS α = .79, for SPP social competence α=.74, and global self-worth α =.81). A further reliability check examining the average of inter-scale item correlation has been carried out. All scales showed a significant correlations of a small to medium effect size, see Table 4-1.

Table 4-1

Inter-scale item correlation mean for all translated scales

Scale	Mean
Loneliness and social dissatisfaction	.20
SPP social competence	.31
SPP global self-worth	.39

Evaluation of validity. Validity is the extent to which a test measures what it seeks to measure (Brown, 2005). Three different types of validity (content validity, criterion validity, and construct validity) are considered here (Brown, 2005).

Content validity. This validity tests the degree to which the instrument's items are relevant and representative of the variables being assessed (Haynes et al., 1995). To this end, three experts with PhD degrees in psychology were asked to check for content validity of the Arabic versions. They were asked to verify that the content for the items on each scale was consistent with what they intended to measure and could be used in the target culture. They were asked to rate each item on scale of 1-4 (where 1 = *not relevant*, 2 = *somewhat relevant*, 3 = *quite relevant* and 4 = *highly relevant*). Percent agreement of the three experts together who gave either 3 or 4 on each item was calculated to summarise the level of content validity. The results showed that the percentage of agreement levels across questionnaires was 81% for LSDS, and 83% for SPP.

Criterion validity reflects how closely the results of the test being used correlate with the results of another test (Middleton, 2019). One type of criterion validity is concurrent validity, which considers the extent to which scores on two related measures are associated, when both measures are completed within a short time of each other (Boateng et al., 2018). Here, bilingual speakers were asked to complete the original and translated questionnaire versions. Because there were not enough bilingual children in the UK, the data was collected from adult native Arabic speakers who had studied, or were studying, for a degree taught in English in the UK. After excluding those who were taking English courses at the time of the study, 10 people took part (6 males and 4 females). The participants either completed the source or target versions of the questionnaires first, and one week later, completed the other version.

The Shapiro–Wilk (W) test was used to test normality. Data from both the English (E) and Arabic (A) versions were found to be normally distributed for LSDS ((E) W(10) =.91, p = .33; (A) =.93, p = .47), SPP social competence ((E) W(10) =.91, p = .53; (A) = .94, p = .59), and SPP global self-worth ((E) W(10) =.89, p = .21; (A) = .94, p = .61). In addition, further analysis was conducted to explore whether there were significant differences between the two versions of each questionnaire, and if responses across participants were correlated.

Table 4-2 shows the mean scores (SD and range) for the source and target versions of the English and Arabic questionnaires completed by the bilingual speakers. The results showed no significant differences between the source and translated versions of the Loneliness and Dissatisfaction Scale t (9) = 1.86, p = .09; the social competence subscale t (9) = -1.50, p = .16; or global self-worth t (9) = -1.04, p = .32. Correlational analyses showed strong positive associations between the original and translated versions (LSDS, r = .94; social competence, r = .91; and global self-worth, r = .94).

Table 4-2

Descriptive statistics (mean M, standard deviation SD, and range) for the loneliness and social dissatisfaction (LSDS) and self-profile perception (social competence and global self-worth) sub-scales (English) and target (Arabic) versions

Measure (N=)	English		Arabic	
	M (SD)	Range	M (SD)	Range
Loneliness/social dissatisfaction	40.40 (9.62)	28-55	38.60 (8.95)	28-54
Social competence	15.90 (3.78)	11-23	16.70 (4.11)	11-24
Global self-worth	16.60 (4.62)	11-24	17.10 (4.28)	11-24

Construct validity tests whether the measurement tool measures the hypothesis or theory it intends to measure (Ginty, 2013; Middleton, 2019). Previous research has found that the LSDS is made up of two distinct factors including loneliness and social dissatisfaction. These factors can be attributed to how items were worded in the scale (Bagner et al., 2004; Jarvinen & Nicholls, 1996). An exploratory factor analysis (EFA) was run to examine the structure construct of this scale in the translated questionnaire. There is no strong agreement on what the sample size should be to run an EFA. Hair et al., (2014) proposed a minimum number of 100 participants. In addition, some researchers suggested running the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO-test). If the value of the KMO is greater than .5, the sample is adequate (Field, 2018). In this study, the 106 children described in the reliability section were included. Thus, the minimum amount of data (n=106) for factor analysis was satisfied, with a final sample providing a ratio of over six cases per item. The factorability of the 16 LSDS items was examined.

Several well-recognised criteria for the factorability of a correlation were used. Firstly, it was observed that 10 of the 16 items had a correlation of .3 or higher with at least 2 other items, and 4 items were correlated with at least 1 other item, suggesting reasonable factorability (see Appendix B.1). Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .76, above the commonly-recommended value of .5. In addition, Bartlett's test of Sphericity was significant ($\chi 2$ (120) = 403.58, p<.01). In light of these indices, a factor analysis with all 16 items was considered appropriate.

Principal Axis Factoring (PAF) was used because the primary purpose was to identify and compute composite scores for the factors underlying the LSDS scale. Then, oblimin and varimax rotations were conducted to establish if the items could be loaded in two factors. The varimax rotation provided the best-defined factor structure with the two factors. All items in this analysis had primary loadings over .4. The initial eigen values indicated that the two factors explained 24.86% and 12.28% of the variance respectively. The two-factor solution, which explained 37.15% of the variance, was preferred because of: (a) its previous theoretical support; and (b) the insufficient number of primary loadings and difficulty in interpreting the other factors.

Factor 1, namely "Loneliness", comprised nine items with factor loadings from .44-.81, and all items loaded into this factor were non-reverse coded. Factor 2, namely " social dissatisfaction", comprised five items with factor loadings from .48-.69, and all items loaded into this factor were reverse coded. One item was eliminated, namely "It's hard for me to make friends", because it did not contribute to any factor structure and failed to meet a minimum criterion of having a primary factor loading of .4 or above. One item, namely "I have lots of friends", showed cross-loading of .3 or above between factors 1 and 2. The factor loading matrix for this final solution is presented in Table 4-3.

The factor labels were obtained from the literature and are consistent with the scale structure. Internal consistency for each of the factors was examined using Cronbach's alpha. The two factors and total scores were internally consistent. Descriptive data (mean, standard deviation) as well as Cronbach's alpha are presented in Table 4-4. In addition, table 4-5 presents the intercorrelations between the two factors and total scores. The intercorrelations ranged from .30-.88. The results were similar to those reported by past studies (Bagner et al., 2004; Jarvinen & Nicholls, 1996) using the same instrument.

Table 4-3

Factor loadings based on a Principal Axis Factoring (PAF) with varimax rotation with Kaiser Normalisation for 15 items from the (LSDS) Scale (N = 106)

	Factor loadings	
	1	2
Factor 1: Loneliness		
I feel left out of things (unwanted)*	.81	
I'm lonely	.69	
There's nobody I can go to when I need help	.59	
It's hard to get other kids to like me	.58	
I don't have anyone to play with	.57	
I don't get along with other children	.56	
I don't have any friends	.52	
I feel alone	.50	
I have nobody to talk to	.44	
Factor 2: Social dissatisfaction		
I get along with other kids		.69
I'm good at working with other children		.69
I can find a friend when I need one		.68
I have lots of friends	.31	.57
It's easy for me to make new friends at school		.54
I am well-liked by the kids in my class		.48

* Adapted item. See Appendix A.2 for more details.

Table 4-4

Descriptive statistics (mean M, standard deviation SD and Cronbach's alpha) for the two Loneliness and Social Dissatisfaction Scale two factor solution and total scores (N = 106)

	No. of items	M (SD)	Cronbach's α
Loneliness	9	2.08 (83)	.76
Social dissatisfaction	6	2.22 (.89)	.70
Total scores	15	2.11 (.71)	.78

Table 4-5

Inter-scale Correlations for the two factors and total scores of the LSDS

	Loneliness	Social Satisfaction	Total scores
Loneliness		.30**	.88**
Social dissatisfaction			.72**
Total scores			

**. Correlation is significant at the .01 level

As the items in Harter's subscales were loaded based on wording (items starting with positive statements were loaded together regardless of the subscale purpose), another method was used to examine the construct validity. Some authors suggest other methods to test the construct validity such as convergent construct validity, which tests the relationship between two scales that are related and have some overlap (Ginty, 2013; Shuttleworth, 2009). A review of the literature showed a negative relationship between feelings of loneliness and higher social competence and self-esteem (e.g., Al Khatib, 2012; Du et al., 2018; Lodder et al., 2016). Thus, Pearson and Spearman correlational tests were conducted to examine whether there was a significant negative relationship between the LSDS with social competence and global self-worth in this study on one hand, and a positive correlation between the two subscales on the other hand. The results revealed that the LSDS was significantly negatively correlated with social competence (r= -.30; rs = -.29, ps < .01) and global self-worth (r= -.29; rs = -.23, ps < .05). Moreover, a further check testing the correlation between the social competence and global self-worth showed positive significant correlation (r= .94; rs = .94, ps < .001).

Step 5 (Finalisation): After checking the versions of the scales, a final version was created to be administered. In this step, more checking was conducted for the final Arabic versions (see Appendix A.2 and A.3). To achieve this, it was necessary to compare the participants to an appropriate reference group. This step can be verified through the application of statistics, such as average, standard deviation, percentile rank, and T and Z scores (Banville et al., 2000). Descriptive statistics (mean, standard deviation and range) were used to make comparisons among the same 106 children, divided into two age bands, as shown in table 4-6.

Age and Gender Effects

Multiple Independent Samples Tests were conducted to check if there is an age or gender effect. The results showed no age effect across all scales (*p*s > .05). Gender showed a significant effect in social competence with boys rated as less socially competent (M = 16.49, SD = 3.35) than girls (M = 19.23, SD = 3.90), 95% CI [-4.21, -1.28], $t(104) = -3.72$, $p = .000$, $d = .75$. Both LSDS and GSW showed no significant gender difference (*p*s > .05).

Table 4-6

Descriptive statistics (number of children n, mean, Standard deviation SD and range) for two age bands of the Arabic versions of the two factors of Loneliness and Social Dissatisfaction Scale, and the social competence and global self-worth subscales from the Self-Perception Profile for Children (n = 106)

Age band	Scale	Mean (± SD)	Range
8-10 (n = 55)	Loneliness	2.16 (±.84)	1-4.56
	Social dissatisfaction	2.13 (±.85)	1-4.33
	Social competence	3.14 (±.64)	1.67-4
	Global self-worth	3.10 (±60)	1.83-4
11-12 (n = 51)	Loneliness	2.00 (±.81)	1-4.22
	Social dissatisfaction	2.31 (±.92)	1-5
	Social competence	2.90 (±.64)	1.17-4
	Global self-worth	3.00 (±.70)	1.33-4

4.5 Summary

This study aimed to cross-culturally translate and adapt two scales from English into Arabic. The two scales, Asher et al.'s (1984) Loneliness and Social Dissatisfaction Scale and Harter's (1985, 2012) Self-Perception Profile (Social Competence and Global Self-Worth subscales), were translated and adapted following the process put forward by the World Health Organization (WHO, 2010). The WHO's process consists of five practical steps, each involving different people and approaches, to ensure all scales are valid. The results showed that all scales had a satisfactory level of reliability and validity in

Saudi culture. The final version was used in a sample of children raised in Saudi Arabia by their biological parents, adoptive parents, or in institutional care settings (see Chapters 5 and 7).

All of the scales were tested for different types of validity, an approach used in different studies (e.g., Eapen et al., 2000; Maes et al., 2016). The process showed that the loneliness and social disaffection scale was the subject of three types of validity. First, content validity was examined by three experts using percent agreement between raters, with the results showing a good level of expert agreement for the translated version. The criterion validity was then checked to determine whether the Arabic version accurately represented the source. These findings were important in establishing this type of validity. The hypothetical and theoretical base of LSDS was examined through factorability, and the scale items successfully loaded on to its two factors. The further scale construct check showed a significant association with other overlap measures, suggesting good validity of the construct. The findings corresponded to those recorded both in the United States (Bagner et al., 2004) and outside (Maes et al., 2016).

This study also examined the social competence and global self-worth subscales of Harter's self-perception profile, and specifically, subscales related to social competence and self-worthiness. Moreover, the SPP was translated and adapted into different languages like Arabic, Dutch, and Spanish. The current study found that both subscales were valid for use in Saudi culture, and overall, the findings of the current study are consistent with those reported in the original sample, as well as the Dutch and Spanish samples for the social competence subscale and global self-worth. The means of scale items of the previous and current study results are around 3. Conversely, the Saudi sample showed higher social competence and global self-worth mean scores compared to a further study that worked with Emirati children in the same age range, as their means were 2 (Eapen et al., 2000).

This study examined the effect of age and gender. The literature showed some variance between genders, with girls more likely to be socially competent than boys in childhood (e.g., Abdi, 2010). Similarly, in the Saudi sample, boys reported lower social competence compared to girls. This finding is consistent with the findings from other studies (Granleese et al., 1988; Maes et al., 2019) which found that children and adolescent boys tended to show poorer social ability than girls.

This study provides an important contribution to the feasibility of utilising these scales with children from Saudi Arabia. The results indicate valid and reliable psychometric proprieties in Saudi culture. The merit of this study is the substantial and rigorous process it has undergone, from the translation, through to synthesis, back translation, expert committee review, and pre-testing. Further research should be done to include more participants to verify the current findings.

4.6 Limitations

Even though the results appeared to be positive, there is a need to further examine the adapted scales in Saudi Arabian culture with a larger sample in order to ensure the scales' validity and reliability. Furthermore, data on comparable measures for the same population was not available, but would make it easier to conduct validity checks in depth. Part of the data collection in step 4 was carried out by school counsellors. This made it hard to conduct test-retest reliability. Additionally, some children did not understand how to complete scales, which resulted in some responses being excluded.

4.7 Conclusion

This study set out to determine if the loneliness and social dissatisfaction scale, social competence, and global self-worth subscales of the self-perception profile are psychometrically sound in Saudi culture. The process of translating and adapting the scales is based on World Health Organization (WHO) guidelines. All scales have undergone different steps of forward translation, expert panelling, back translation, and testing the produced versions to check their validity. This study finds that, generally, all scales showed a good level of validity for use in Saudi culture. Although the current study is based on a small sample of participants, these findings suggest that the psychometric properties for measuring social adaptation and global self-worth are supported.

5 Chapter Five: Psychosocial and Cognitive Function in Children Who Grow Up in Institutional Care or Are "Cuddled" in Saudi Arabia

5.1 Introduction

Alternative care settings in Saudi Arabia, as presented earlier, comprise institutional and cuddling care (Chapter 1). "Cuddled" children, as described previously, are children who live with non-biological families through a process equivalent to adoption, with some variations in the procedures and policies. Children enter these different care settings for a number of reasons, but predominantly because they are abandoned at birth. To date, little research has been published on the developmental outcomes of growing up in alternative care settings in Saudi Arabia, and the extent to which children's development differs depending on the types of settings they grew up in. In addition, there has been no efficient study of developmental outcomes for the cuddled group.

Increasingly, research has investigated whether children and adolescents from alternative care settings, especially institutional care, have an increased risk of meeting the criteria for clinical disorders. Findings from cross-sectional and longitudinal data indicate that children in institutional care settings have an elevated risk of developing mental health problems, including symptoms of internalising and externalising behaviours (e.g., anxiety, depression, and specific phobia) (Gagnon-Oosterwaal et al., 2012; Ojha et al., 2013). For example, in the UK, the incidence of mental health problems, such as internalising and externalising behaviours, is substantially higher for children living in residential care than for non-care residents (Stanley et al., 2005). However, outcomes for children in adoptive care are more varied with regard to mental health (Anthony et al., 2019; Keyes et al., 2008). Both groups' outcomes stress the importance of investigating mental health domains in these populations.

The evidence presented in Chapter 2 also shows that a child's function in social and cognitive domains, including feelings of loneliness and social

satisfaction, self-perception, and cognitive ability, vary between alternative care settings. Feelings of loneliness and social acceptance both can contribute to perceptions of self-worth (Vanhalst et al., 2013). Data obtained from studies of the effects of institutional care on development showed that social deficits were associated with rearing environment. For instance, children with exposure to institutional care showed poorer social development compared to children reared by birth parents or placed early into adoption (Schoenmaker et al., 2014). Moreover, institutionalised children showed lower cognitive function, such as having IQ scores below those of typically developing children, and these deficiencies were primarily due to the age at which the child entered institutional care – the younger the child, the more likely they seem to demonstrate higher cognitive impairment (van IJzendoorn et al., 2008). In contrast, children put into adoption earlier display better outcomes in social development and cognitive performance (e.g., van IJzendoorn et al., 2005).

In summary, several studies have explored developmental outcomes based on the child's experience (van IJzendoorn et al., 2011) and across specific care setting characteristics, such as structure (e.g., family model or institutional care), and quality of caregiver-child interaction (Chapter 3; García-Quiroga & Hamilton-Giachritsis, 2014; Groark et al., 2005; Hart et al., 2015; Vorria et al., 2003). The present chapter will explore variations in children's developmental outcomes associated with growing up in different care environments (e.g., different alternative care settings, and birth family) in Saudi Arabia.

5.2 Factors Affecting Development

Considering the impact of alternative care on child development, Julian and McCall (2011) argued that adoptive homes provide the best form of 'alternative' care when compared with other settings like institutional care. Adopted children also report a higher sense of belonging to their adoptive family compared to children growing up in other alternative care types (Triseliotis, 2002). However, adoptive care brings its own set of challenges (Groza & Muntean, 2015). One such challenge is that the adoptees are raised in families they are not genetically connected to, which may affect the development of identity and/or expose them to bullying because of their familial status (Selwyn et al., 2014).

Chapter 2 summarised institutional care as being associated with poorer development outcomes than other care settings. Some authors (e.g., McCall, 2011) attribute this to the level of deprivation that institutionalised children are exposed to. However, institutional care environments vary: some were reported to be severely lacking in almost every physical and psychosocial aspect (Rutter et al., 2007); others offered better care with respect to physical and health care provisions, but were insufficient in terms of psychosocial care (the St. Petersburg-USA Orphanage Research Team, 2008). A third type of institutional care considered with a lower level of deprivation also exists in institutions where children do not experience the interactions of typical family life (van IJzendoorn et al., 2011).

Several factors are important when studying the impact on children's development with regard to growing up in alternative care. Firstly, their experiences prior to placement in alternative care can influence later development. For example, adverse prenatal influences (e.g. poor maternal nutrition and mental health) have been linked to neurobiological alterations associated with poorer developmental outcomes in children (Ross et al., 2014). Moreover, neurodevelopmental disorders such as those associated with autism spectrum conditions (ASC) and attention deficit hyperactivity disorder (ADHD) arising from experience-dependent alterations in brain structure and function during early development can affect behavioural and cognitive functioning (van Loo & Martens, 2007). Genetic factors might also play a role in the aetiology of these neurodevelopmental difficulties, in particular, among those who are experiencing adversity such as maltreatment as there is a possibility of increased risk due to the parents maltreating their children because of their own genes increasing risk of neurodevelopmental disorders in parents (Dinkler et al., 2017). Secondly, once placed in alternative care, the child may have disruptive experiences (frequent moves between or changes in care settings) and deprivation (through inconsistent institutional care provision, leading to a failure to develop healthy, trusting, and continuous relationships with others), which may negatively impact developmental prospects for children, and can further compound the impact of adverse experiences prior to placement in care (Bornstein, 2019; Hoppen & Chalder, 2018).

According to the theory of latent vulnerability (McCrory & Viding, 2015), children develop behaviours in their non-normative environment characterised

by deprivation or unpredictability, which are potentially adaptive in these contexts. Once they are removed from adversity and placed in better (or more normative) care contexts, the same behaviours and cognitions comprise vulnerabilities that can lead to the emergence of behavioural and mental health difficulties. For example, children with early adverse experiences of maltreatment or neglect are more likely to be at risk for symptoms of mental health problems when, for example, they encounter high-stress events. This is because their "altered calibration" (p. 493), developed during the prior risk-context, has become maladaptive in the longer term, despite their having received an intervention and subsequent better care. However, the presence of latent vulnerabilities does not necessarily indicate the exact time their clinical problems occur.

In summary, the form of care provided per se, is inherently neither defective nor supportive in improving the lives of the children being looked after. Instead, associations between care type and later development can be attributed to different factors, such as the severity and timing of exposure to negative experiences (Hoppen & Chalder, 2018). Therefore, it is better to assume that all types of care have the capacity to improve outcomes when they provide the right conditions. Researchers have argued that the nature of the care setting can shift the developmental path of the child's journey, and can either encourage individual and social progress, or underpin or exacerbate poor outcomes (Fisher, 2015).

5.3 Aims and Objectives

As presented in Chapter 2, most studies of alternative care in Saudi Arabia focus on just one type in particular: institutional care. Additionally, all of the available data appear to be limited to the mental, behavioural, and social aspects of children in this care context. In contrast, there is a lack of data from Saudi Arabia on the development of 'cuddled' children. Therefore, the current study aims to explore outcomes of children abandoned in early life and placed into cuddling (i.e., adoptive) families. In addition, the study aims to extend existing findings to consider the development of children raised in institutions. This study investigates the impact of care experiences on development across contexts (home and school) across three groups of children in middle childhood (i.e., 8-12 years): children raised in institutions (CRI); adopted children raised with non-biological families ("cuddled children"

(CC)); and children who live with their biological parents from birth (the typically developing (TD) group).

The study compared group differences in psychosocial functioning, including self-reported mental health symptoms (anxiety and depression), social functioning (loneliness, social dissatisfaction), self-perception (social competence and self-worth), and IQ. Parents and teachers also provided information about children's behaviour (Strengths and Difficulties Questionnaire (SDQ)), including pro-social behaviour, internalising, externalising, and total difficulties. In addition, associations were explored between different measures of children's psychosocial functioning, as well as child's gender and age, and carers' age.

It was anticipated that children raised in alternative care – especially those in institutional care – would report more mental health symptoms (anxiety and depression), more negative social outcomes (higher feeling of loneliness and lower pro-social behaviour), poor self-perception (lower social competence and self-worth), increased behavioural problems, and lower cognitive ability.

This research has significant implications for the development of common and tailored future programmes and services that support children raised in different care settings; specifically it may assist caregivers and decision-makers in improving services that benefit children's development and well-being.

5.4 Methods

5.4.1 Participants

Ninety-six Saudi children (52 boys and 44 girls) from three groups (CRI, CC, TD) were recruited for this study; all were attending school at the time of collecting data. Table 5-1 presents descriptive data of children and their primary caregivers. The CRI group included 32 children (boys: n = 18) from three home-based and one ward-based Saudi institutions. Their recruitment is described below (see Procedure). All CRI had been in institutional care from birth due to parental abandonment. All children had experienced a move from at least one institution to another either due to institutional closure or having to move to a family-like single-gender institution because of age (as discussed in Chapter 3). Most children had been exposed to some level of difficult early-

life experience (e.g., early abandonment, frequent change in caregiver). Data on their previous institutions was not available, but in Saudi Arabia generally, previous institutional settings tend to reflect the global definition of this type of care (i.e., a large number of children with few caregivers), as reported by the carers in the demographic form.

The CC group included 28 children (boys: *n* = 15). Due to parental abandonment, all children had been placed into institutional care for a short period after birth before being placed with their cuddling family. All children in the CC group had been placed within their first year of life, usually at or before the sixth month of age, ranging from nine days to 10 months after birth. Twenty-four children had been housed with two parents, while four had been placed with single mothers. Almost all caregivers (*n* = 26) reported that their children had been breastfed by the cuddling mother or a cuddling family relative (e.g., mother's sister). Islamic Shariah mandates that breastfeeding allows the carer to consider the child as their own, which in turn allows the child to stay with this family even after adulthood (see Chapter 1). All the children in the CC group were aware of their familial status (being cuddled and living with non-biological parents).

The TD group included 36 children (boys: *n* = 19) who had been with their biological parent(s) since birth. Eight lived with only their mothers, and the rest lived with both biological parents.

Caregivers. In terms of caregiving, 77 primary carers across the three groups completed the SDQ for 95 children. For the CRI group, assessments were completed by 13 primary caregivers across the four institutions (female: n = 10, from mixed gender institutions). Eight of the primary caregivers had completed a high school education, while the others had graduate degrees. In three institutions, caregivers worked for 7-8 hours. In the fourth institution, the carers worked on a rotating shift pattern (see Chapter 3).

Twenty-eight cuddling primary caregivers (female: *n* = 20) took part in this study. The motivations to cuddle a child reported in the demographic form reflected either infertility and/or religious reasons. The education level of primary caregivers varied, from high school (11 carers) to post-graduate degrees.

For the TD group, thirty-five parents (female: *n* = 26) took part in this study. Eight were single mothers. The primary caregivers varied in their

education level, with seven parents reporting high school educations, and the rest reporting a graduate degree or higher.

Thirty-eight teachers (CRI: *n* = 4, three females; CC: *n* = 10, three females; TD: *n* = 24, ten females) took part in the assessment of 77 children's strengths and difficulties across the three groups.

Table 5-1

Descriptive data of the demographic information (number of children n, mean m, and standard deviation SD and range) of children and carers' ages for each group

	Children			Carers		
Group	*n*	*M (SD) of age*	*Range*	*n*	*M (SD) of age*	*Range*
CRI	32	9.75 (1.56)	8-12	13	43.47 (7.81)	31-62
CC	28	9.04 (1.47)	8-12	28	46.82 (5.26)	34-59
TD	36	9.85 (1.35)	8-12	36	41.33 (6.52)	30-56
Total	96	9.58 (1.48)	8-12	77	43.43 (7.06)	30-62

5.4.2 Measures

Demographic information. A form was used to gather demographic information about each child's background. It included questions related to personal information (gender, age, date of birth), educational level, primary caregiver's information (name, age, and gender), level of education, relationship status, caregiver's role (primary caregiver, helping their partner), and siblings. More details were asked about the children in institutional care, such as their number of previous care settings, and their history with previous caregivers. Primary carers of cuddled children were asked how long the child had been with the family, whether the child had been cuddled before, and their motivation for cuddling.

Self-reported measures

Emotional symptoms. The Beck Youth Inventories-II (Beck et al., 2005) were used to measure child-reported anxiety (BAI-Y) and depression (BDI-Y). The scales were developed to assess emotional symptoms in children and adolescents from 7-18 years of age. Each scale consists of 20 items. For each item, the child is asked to assess the level to which they agree with each statement on a four-point Likert scale, ranging from 0 (never) to 3 (often). The possible score range for each inventory is 0–60. The total scores were converted to equivalent *t*-scores to reflect the severity of emotional and

behavioural symptoms. A *t*-score of 55 or above indicates that the child shows symptoms of that test. The Beck Youth Inventories-II have been shown to have a high level of internal consistency (anxiety subscale, $\alpha = .92$; depression subscale, $\alpha = .91$). For the purpose of this study, the Arabic version translated and adapted in the psychology department in the University of Southampton (Al-Kathiry, 2014) was utilised (equivalent versions in English were purchased).

Social and self-functioning. The Loneliness and Social Dissatisfaction Scale (LSDS) (Asher et al., 1984) and the social competence and global self-worth components of the Self-Perception Profile for Children (Harter, 1985, 2012) served as indices of social and self-functioning.

The LSDS was designed for children between 8-12 years of age and consists of 24 items. Sixteen items measure feelings of loneliness and social dissatisfaction, as well as subjective estimations of peer relationships. Eight statements are filler items that focus on children's hobbies or preferred activities. The participants were asked to rate the extent to which they agreed with each statement (e.g. "I get along with other kids") using a five-point Likert scale ranging from 1 (*not true at all*) to 5 (*always true*), generating a total potential score ranging from 16–80. Higher scores indicated increased feelings of loneliness and social dissatisfaction. The LSDS has been found to show excellent internal consistency (ranging from .87 to .90) (Bagner et al., 2004). The translation and adaptation of the scale from English to Arabic is described in Chapter 4.

The social competence (SC) and global self-worth (GSW) subscales (Harter, 1985, Harter, 2012) measure children's perceptions of their social abilities and self-esteem. The self-reported scale was designed for children between 8-13 years of age, and has specific domains, each assessing a functional life domain as well as the separate global self-worth subscale. The five domains are scholastic competence, social competence, athletic competence, physical appearance, and behavioural conduct, as well as the global self-worth. The current study used the social competence (e.g., "Some kids know how to make classmates like them, BUT other kids don't know how to make classmates like them"), and global self-worth (e.g., "Some kids like the kind of person they are, BUT other kids often wish they were someone else") scales.

The children were asked to assess the extent to which they agreed with each statement. Each item was scored on a scale of 4-points ranging from 1 (*lowest perceived ability*) to 4 (*highest perceived ability*). For each subscale, the scores range from 6 to 24 and higher scores suggest higher self-perception. The Self-Perception Profile for Children is highly reliable and internally consistent (social competence subscale α ranges from .75 to .84; the global self-worth subscale α ranges from .78 to .87) (Harter, 2012). Both subscales were translated and adapted as presented in Chapter 4.

Parents and teachers report

Arabic translations of the caregiver and teacher versions of the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) were administered to measure child and adolescent behaviours, emotions, and relationships with peers. The questionnaire includes 25 statements covering five subscales: emotional problems, peer problems, conduct behavioural problems, hyperactivity, and pro-social behaviour, as well as total difficulties, which consists of the sum of the first four subscales. In this study, the method proposed by Goodman et al. (2010) was used. The questionnaire was classified into three subscales: internalising behaviours (10 items made up of emotional symptoms and peer difficulties items), externalising behaviours (10 items made up of conduct behavioural problems and hyperactivity items), pro-social behaviours (five items) and total difficulty scores of both internalising and externalising subscales. The caregivers and teachers were asked to rate the extent to which they agreed with statements about their children (e.g., "Often complains of headaches, stomach-aches or sickness") using a three-point Likert scale ranging from 0 (*not true*), to 1 (*somewhat true*) to 2 (*certainly true*). Becker et al. (2004) and Stone et al. (2010) have reported a good level of reliability for the SDQ. In an Arabic-speaking sample, the cut-off scores of the SDQ for total difficulties was 17, at which point mental health problems can be predicted (Thabet et al., 2007).

For missing data on individual items on scales, the mean of available scale responses for each child was used and imputed if there were no more than four items of the Beck inventory, three items of LSDS, two items in each of both self-profile perception subscales, and five items of the SDQ missing.

Cognitive function

IQ. Verbal and nonverbal ability were assessed in this study using the Wechsler Intelligence Scale for Children (WISC: Wechsler, 2003, 4th version), developed for children between 6-16 years of age. This test has been found to have a good level of validity and reliability (Hrabok et al., 2014; Strauss et al., 2006; Williams et al., 2003). The Arabic version's vocabulary and block design subtests were administered (Melika, 2007). The Arabic version was found to show an excellent level of reliability (Hadi & Murad, 2014).

5.4.3 Procedure

Ethical approval was obtained from the Psychology Ethics Committee and the University of Southampton's Research Governance body. In addition, the Ministry of Human Resources and Social Development and Education Ministry in Saudi Arabia approved this research to work with children across the three groups. Children in alternative care (CRI and CC) were contacted through the Ministry of Human Resources and Social Development as the local authority that supervises all alternative care settings (institutions and cuddling) in Saudi Arabia. The cuddling department contacted families who had children aged 8-12 years at the time of the study to ask for participation. The number of children who had been contacted in the CC group is not known. In addition, all children recruited for the CC group know their current status as being cuddled by non-biological parents. TD children were contacted through the Ministry of Education in Saudi Arabia via schools which sent invitations to children's parents. Caregivers had to go through participation information sheets explaining the nature of the study. After agreeing to take part, they signed informed consent forms, and the child signed their own assent form. At this stage, the caregivers were also asked to complete a demographic form and the SDQ. The legal guardians of children in institutional care are the heads of the institutions, and so these heads were contacted to sign the informed consent form giving permission to conduct work with the children and their primary caregivers in the institutions. Teachers were also asked to sign an informed consent form before participating in this study (see Appendices C).

Psychologists and social workers from the institutions and the cuddling departments worked with the children to complete the emotional and behavioural symptoms, social functioning, and self-perception questionnaires.

School counsellors worked separately with children in the TD group to help them complete the self-reported questionnaires. As instructed, they read each statement to the child clearly, helped them to understand each one, and asked them to fill out the questionnaires according to what extent they agree. Parents or primary carers and teachers were asked to complete the strengths and difficulties questionnaire to assess every child participating in this study. The researcher completed the IQ test individually with each child. The number of each completed returned scale is shown in Table 5-2.

5.4.4 Approach to analysis

A series of univariate General Linear Model (GLM) analyses were conducted to examine the group differences, with the three group levels as the independent variable predicting symptoms of mental health, social adaptation, self-perception variables, behavioural problems, and cognitive ability. A correlational analysis was conducted to examine the relationship between demographic information (i.e., gender, age, and carer's age), emotional (anxiety, depression symptoms), social and self-perception (loneliness and social dissatisfaction, social competence and self-worth), behavioural symptoms (pro-social performance and total difficulties), and cognitive ability. For scales that did not meet the parametric test's assumptions, equivalent non-parametric tests were run. All analyses were conducting utilising the Statistical Package for the Social Sciences SPSS version 26.

5.1 Results

Preliminary analysis

Data distribution of normality was explored by the Shapiro–Wilk test (Shapiro & Wilk, 1965) and the calculated z-score of the skew and kurtosis for each variable in each group. If the z-score was ± 2, it was considered problematic (George & Mallery, 2010; Field, 2018). The homogeneity of variance was assessed by Levene's test (Levene, 1960). The scales that met the assumptions of parametric tests for group comparison were anxiety, loneliness, social competence, global self-worth, SDQ externalising behaviour and total difficulties of the parent report and internalising behaviour, total

difficulties of teacher report, and IQ[2],[3]. Descriptive details for all scales are shown in table 5-2.

Correlational analyses

Correlations were computed between gender, age, and carer age with self-reported scales, parent and teacher questionnaires, and IQ scores. Table 5-3 shows a strong negative correlation between carer age and GSW subscale. The BAI-Y was positively correlated with depression symptoms, higher feelings of loneliness, and higher SDQ total difficulties. BAI-Y scores showed a negative correlation with both self-profile perception subscales. The LSDS showed a positive correlation with depressive symptoms and the SDQ total difficulties of both the carer and teacher versions. At the same time, both the SC and GSW subscales were negatively correlated to the LSDS. In addition, IQ scores were positively correlated with the social competence and global self-worth subscales. For the SDQ, both the total difficulties and prosocial scales of carers versions were positively correlated with the equivalent scales of the teacher version. The pro-social behaviour scores of both versions were negatively correlated with the total difficulties of both versions.

Covariate analyses

Carers' age and children's IQ showed significant correlation with the social competence and global self-worth scales. Accordingly, both should be considered as covariates to reduce the variance of error within the group and eliminate unmeasured variables that could confound the results. However, both measures (carers' age and IQ scores) also showed significant group differences. In this case, some authors (Field, 2016; Miller & Chapman, 2001) argue that entering variables which significantly differed in the independent variable as covariates would not balance out the differences in the outcome variables. Consequently, both variables (carers' age and IQ) were dropped from the analyses, as they violated the assumption of ANCOVA; one-way ANOVA was run instead.

[2] The SDQ total difficulties of parent and teachers' reports violated the assumption of homogeneity and were square rooted to meet this assumption.
[3] Externalising behaviour of parents' reports was skewed in the cuddled group. After square rooted transformation, the scale was normally distributed see Appendix B.2.

Self-reported measures

To examine the differences between the three groups (CRI, CC and TD) with regards to the child's gender, as well as group and gender interactions, several independent univariate analyses of variances by the General Linear Model (GLM) were used for the scales that met the appropriate parametric assumptions. Analyses first considered gender and age differences, and then differences between groups.

Across all self-reported scales, there were no main effects for gender, (*F*s < 3.10 and *p*s > .05) or child's age (*F*s < 3.10 and *p*s > .05), where child's age was recoded into two age groups (i.e., 8-9 year olds and 10-12 year olds).

Emotional symptoms outcomes

The three care groups differed significantly for the BAI-Y scale: $F(2, 93) = 3.64$, $p = .03$ $\eta^2 = .07$). Tukey post-hoc analysis was run and indicated that the CRI group had higher anxiety t-scores compared to both groups (CC and TD group). There were no significant interactions between group and gender on BAI-Y ($F(2, 93) = 1.26$, $p = .28$). Clinically, 11 (34 %) CRI (boys: n = 6), five (18%) CC (boys: n = 3) and nine (25 %) TDs (boys: n = 5) had a t-score ≥ 55, which indicated mild-to-moderate levels of anxiety. For the BDI-Y scale, which did not meet the parametric assumptions, a Kruskal-Wallis Test was conducted to examine the differences between the groups. No significant differences were found between the three groups $\chi^2(2) = .09$ $p = .96$. CRI and CC showed similar results with TDs (*Mdn* = 41.50). Clinically, four (12.5%) CRI (boys: n = 2), two CC boys (7%) and two TD girls (5.5%) had a t-score ≥ 55, which shows mild-to-moderate symptoms of depression.

Social and self-functioning

There was also a main effect of group for the Loneliness and Social dissatisfaction Scale: $F(2, 93) = 6.72$, $p = .01$, $\eta^2 = .13$. Tukey post-hoc analyses indicated that the CRI group reported significantly more loneliness and social dissatisfaction than the TD and CC groups. TD and CC groups showed no significant difference. Additionally, the group and gender interaction were not significant for the LSDS, $F(2, 93) = 1.38$, $p = .25$, $\eta 2 = .03$.

The social competence subscale showed a statistically significant difference between the groups, $F(2, 93) = 19.63$, $p = .001$, $\eta^2 = .30$, such that the CRI group was lower in social competence perceptions compared to the other two groups (the CC and TD groups were not significantly different from each other). The global self-worth subscale also showed a main effect of group ($F(2, 93) = 13.86$, $p = .001$, $\eta^2 = .23$). The TD children had significantly better perceptions of self than the two other two groups. Group and gender interaction were not significant for either the social competence subscale ($F(2, 90) = .74$, $p = .48$, $\eta^2 = .01$), or the global self-worth subscale ($F(2, 90) = .80$, $p = .45$, $\eta^2 = .01$).

Caregivers and teachers' reports

There were no significant main effects of gender, $ps > .05$ for either the carer or teacher versions.[4] For child age, the results showed no statistical differences between the two age groups in the externalising behaviours, pro-social behaviour subscales, and the total difficulties for both the carer and teacher versions ($ps > .05$). However, the carer version showed significant effects of age for the internalising behaviour subscale between younger children ($Mdn = 6$) and older children ($Mdn = 5$, $U = 818$, $z = -2.29$, $p = .022$), with younger children reported as showing more internalising problems.

In terms of caregivers' perception of their children, the groups did not show significant differences in externalising behaviour. The total difficulties showed significant difference ($F(2, 92) = 3.90$, $p = .02$). Post-hoc analyses indicated that the CRI had the highest total difficulty scores compared to the CC but not the TD group. For group and gender interactions, there were no statistically significant interactions for externalising behaviours or total difficulties ($Fs(2, 92) < 3.10$, $ps > .05$). For prosocial behaviour, a Kruskal-Wallis H test was run to determine if there were differences in both outcome variables. Median prosocial behaviour scores showed a significant difference between groups, $\chi^2(2) = 14.09$, $p = .001$. Post-hoc analysis indicated that the CC group was more prosocial ($Mdn = 9$) compared to the CRI ($Mdn = 7$) and TD groups ($Mdn = 7$). For the internalising behaviour problems subscale, a Kruskal-Wallis H test was run to determine if there were differences in the

[4] T-test was conducted for scales that meet parametric assumptions and Mann-Whitney U test for scales that did not. That was similar to the age variable.

outcome variable. For the median internalising behaviour problems subscale, significant differences were found between groups, $\chi^2(2) = 6.35$, $p = .04$. Post-hoc analysis indicated that the CC group showed lower internalising problems (*Mdn* = 5) compared to the CRI (*Mdn* = 6) and TD groups (*Mdn* = 6). Clinically, 31% (10 children; boys: *n* = 7) of CRIs, 11% (all boys: *n* = 3) of CC and 14% (5 children; boys: *n* = 3) of TDs were at or above the cut-off point in total difficulties.

In the teachers' reports for the internalising behaviour subscale and total difficulties, no significant differences were found between the groups ($F(2, 74)$ *ps* > .05). There were no also statistically significant group and gender interactions ($F(2, 74)$ *ps* > .05). Median prosocial behaviour scores showed an insignificant difference between groups ($\chi^2(2) = 1.96$, $p = .37$). The Kruskal-Wallis H test showed no significant difference between groups for externalising behaviour ($\chi^2(2) = .89$, $p = .63$). In total, 25% of CRI (8 children; boys: *n* = 5), 4% of CCs (one boy) and 22% of TDs (8 children; boys: *n* = 4) were at or above the cut-off point in the total difficulties scale.

Table 5-2

The number of participants (n), boys, girls and total mean scores (M), standard deviation (SD), range and internal consistency (Cronbach's alpha) for the following: the anxiety (BAI-Y) and depression (BDI-Y) subscales from Beck Youth Inventories-II; the Loneliness and Social Dissatisfaction Scale; the social competence and global self-worth subscales from the Self-Perception Profile for Children; and the caregiver and teacher versions of the Strengths and Difficulties Questionnaire (SDQ), including the three subscales of pro-social behaviour, internalising behaviours, externalising behaviours, the total difficulties and IQ scores from the Wechsler Intelligence Scale for Children (WISC-IV) for children raised in institutions (CRI), cuddled children (CC), typically developing (TD), and all children.

	CRI			CC			TD			All children		
	(n) M (SD)	Range	α	(n) M (SD)	Range	α	(n) M (SD)	Range	α	(n) M (SD)	Range	α
Emotional symptoms												
	(n = 32)			**(n = 28)**			**(n = 36)**			**(n = 96)**		
BAI-Y	51.25 (7.95)	35–68	.70	46.11 (8.16)	33–67	.85	46.36 (8.71)	33–63	.84	47.92 (8.55)	33–68	.81
Boys	51.72 (6.09)	40–62		44.07(7.91)	33-56		47.26 (7.88)	36-59		47.88 (7.82)	33–62	
Girls	50.64 (10.07)	35–68		48.46 (8.10)	36–67		45.35 (9.70)	33-63		47.95 (9.44)	33–68	
BDI-Y	44.03 (9.04)	34–68	.89	42.79 (7.06)	34–49	.86	43.06 (7.49)	34–68	.84	43.30 (7.86)	34–68	.86
Boys	43.67 (6.95)	34–59		43.13 (8.53)	34-58		44.32 (7.83)	35–68		43.75 (7.61)	34–59	
Girls	44.50 (11.46)	34–68		42.38 (5.19)	35–49		41.65 (7.06)	34–46		42.77 (8.20)	33–64	
Loneliness and social dissatisfaction	**(n = 32)**			**(n = 28)**			**(n = 36)**			**(n = 96)**		
	40.22 (9.14)	26–61	.75	33.57 (8.47)	16–50	.73	32.72 (9.80)	16–53	.76	35.47 (9.72)	16–61	.76
Boys	39.39 (9.08)	26–54		33.07 (9.23)	16-44		35.05 (10.74)	16–53		35.98 (9.92)	16–54	
Girls	41.29 (9.47)	28–61		34.15 (7.82)	24-50		30.12 (8.15)	21–46		34.86 (9.56)	21–61	
Self-profile perception	**(n = 32)**			**(n = 28)**			**(n = 36)**			**(n = 96)**		
Social competence	14.59 (3.15)	10–21	.76	18.79 (3.21)	11–24	.66	18.83 (2.99)	11–24	.73	17.41 (3.67)	10–24	.79
Boys	15.39 (2.91)	12–21		18.80 (3.57)	11–24		19.26 (2.86)	12–24		17.79 (3.52)	11–24	
Girls	13.57 (3.25)	10–19		18.77 (2.89)	14-24		18.35 (3.14)	11–23		16.95 (3.83)	10–24	
Global self-worth	15.03 (3.83)	10–23	.75	17.57 (4.32)	11–24	.84	19.36 (3.93)	10–24	.69	17.40 (4.38)	10–24	.82
Boys	15.11 (3.63)	12-23		18.60 (4.69)	11-24		19.11 (4.61)	10-24		17.58 (4.61)	10–24	
Girls	14.93 (4.22)	10-22		16.38 (3.69)	11-24		19.65 (3.12)	14–24		17.18 (4.13)	10–24	
SDQ-caregiver	**(n = 32)**		.83	**(n = 28)**		.75	**(n = 35)**		.78	**(n = 95)**		.80
Pro-social behaviour	7.38 (1.58)	4-10		8.79 (1.68)	3-10		7.49 (1.80)	4-10		7.83 (1.79)	3-10	
Boys	7.44(1.62)	4-10		8.00 (1.96)	3-10		7.28 (1.78)	4-10		2.73 (.34)	1.73-3.16	

Girls	7.29 (1.59)	4-10		9.57 (.85)	7-10		7.71 (1.86)	4-10		2.83 (.33)	2-3.16	
Internalising behaviour	6.81 (3.30)	3-15		4.96 (2.83)	1-13		6.34 (3.25)	0-14		6.09 (3.20)	0-15	
Boys	7.06 (3.01)	4-15		5.57 (3.75)	1-13		6.06 (3.60)	0-14		6.28 (3.43)	0-15	
Girls	6.50 (3.71)	3-14		4.36 (1.33)	2-6		6.65 (2.91)	2-11		5.89 (2.96)	3-14	
Externalising behaviour	2.61 (.88)	1-4.12		2.33 (.94)	.00-4.90		2.28 (.82)	.00-3.61		2.38 (.88)	.00-4.90	
Boys	2.65 (.92)	1-4.12		2.65 (.65)	1.73-3.74		2.19 (.86)	1 -3.61		2.49 (.84)	1-4.12	
Girls	2.56 (.85)	1-3.87		1.97 (1.11)	.00-4.90		2.23 (.80)	.00-3.61		2.26 (.93)	.00-4.90	
Total difficulties	3.69 (.90)	2. 24-5.29		3.09 (.61)	1.41-4.24		3.43 (.90)	1.41-5.10		3.41 (.85)	1.41-5.29	
Boys	3.75 (.94)	2.45-5.29		3.25 (.63)	2.45-4.24		3.47 (.96))	1.41-5.10		3.50 (.88)	1.41-5.29	
Girls	3.60 (.89)	2.24-5.10		2.90 (.55)	1.41-3.46		3.40 (.85)	1.41-4.90		3.32 (.82)	1.41-5.10	
SDQ-teacher	**(n = 31)**		.87	**(n = 17)**		.82	**(n = 29)**		.80	**(n = 77)**		.83
Pro-social behaviour	7.58 (2.33)	3-10		8.29 (1.16)	6-10		7.34 (2.04)	3-10		7.65 (2.02)	3-10	
Boys	7.67 (2.45)	4-10		8.80 (1.03)	7-10		8.00 (2.12)	4-10		8.05 (2.08)	4-10	
Girls	7.46 (2.25)	3-10		7.57 (.97)	6-9		6.81 (1.87)	3-10		7.19 (1.88)	3-10	
Internalising Behaviour	6.13 (3.54)	0-13		4.41 (2.18)	1-8		6.48 (3.38)	1-15		5.88 (3.29)	0-15	
Boys	5.78 (4.00)	0-13		4.70 (2.54)	2-8		7.23 (3.72)	3-15		5.98 (3.65)	0-15	
Girls	6.62 (2.87)	2-11		4.00 (1.63)	1-6		5.88 (3.07)	1-11		5.78 (2.87)	1-11	
Externalising behaviour	6.68 (5.42)	0-18		4.88 (2.61)	0-9		6.17 (4.50)	0-14		6.09 (4.58)	0-18	
Boys	6.72 (5.71)	0-18		4.50 (2.83)	0-9		6.15 (5.53)	0-14		6.00 (5.07)	0-18	
Girls	6.62 (5.22)	0-17		5.43 (2.37)	2-9		6.19 (3.65)	1-12		6.19 (4.02)	0-17	
Total difficulties	3.38 (1.41)	1.41-5.39		2.94 (.77)	1.73-4.12		3.43 (.92)	1.73-5.29		3.30 (1.02)	1.41-5.39	
Boys	3.31 (1.27)	1.73-5.39		2.94 (.82)	1.73-4.12		3.53 (1.00)	1.73-5.29		3.28 (1.08)	1.73-5.39	
Girls	3.47 (1.12)	1.41-5.10		2.95 (.77)	1.73-3.74		3.36 (.89)	2-4.80		3.33 (.95)	1.41-5.10	
Cognitive ability	**(n = 31)**			**(n = 28)**			**(n = 36)**			**(n = 95)**		
WISC IQ Test	93.81 (9.78)	76–109		99.43 (10.77)	87–118		102.75 (10.25)	85–118		98.80 (10.21)	76–118	
Boys	91.83 (9.75)	91–109		99.73 (8.17)	87–115		103.63 (10.93)	85–118		98.42 (10.87)	76–118	
Girls	96.36 (9.57)	82–109		99.08 (8.86)	88–118		101.76 (9.66)	85–118		99.25 (9.47)	82–118	
Vocabulary subtest	9.28 (2.53)	6-15		11.25 (2.96)	6-19		11.42 (2.23)	6-16		10.66 (2.71)	6-19	
Boys	9.00 (2.95)	6-15		11.47 (3.48)	7-19		11.26 (1.75)	8-14		10.54 (2.93)	6-19	
Girls	9.64 (1.90)	7-13		11.00 (2.34)	6-15		11.59 (2.71)	6-16		10.80 (2.46)	6-16	
Block design subtest	8.59 (2.55)	4-13		8.96 (2.82)	4-15		9.47 (2.67)	4-14		9.03 (2.67)	4-15	
Boys	8.28 (2.34)	4-12		9.20 (3.23)	4-15		9.89 (2.86)	4-14		9.13 (2.84)	4-15	
Girls	9.00 (2.82)	5-13		8.70 (2.35)	5-14		9.00 (2.45)	4-13		8.91 (2.49)	4-14	

Table 5-3

Pearson product-moment correlations for gender; age; carer age; the anxiety (BAI-Y) and depression (BDI-Y) subscales from Beck Youth Inventories-II; the Loneliness and Social Dissatisfaction (LSDS), social competence (SC), and global self-worth (GSW) subscales from the Self-Perception Profile for Children; IQ scores from the Wechsler Intelligence Scale for Children (WISC-IV); and the pro-social behaviour (SDQ-PB) and total difficulties from the caregiver and teacher versions of the SDQ.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1- Gender													
2- Age	-.06												
3- Carer Age	**.25***	.00											
4- BAI-Y	.00	.09	.15										
5- BDI-Y	-.07	-.08	.00	**.66****									
6- LSDS	-.05	-.06	.18	**.28****	**.26***								
7- SC	-.11	-.07	-.02	**-.20***	-.11	**-.42****							
8- GSW	-.10	.07	**-.21***	**-.21***	-.14	**-.34****	**.55****						
9- SDQ-PB Carer	.14	.10	-.06	-.05	-.09	-.10	.06	.01					
10- SDQ Total difficulties-Carer	-.10	-.20	.00	**.23***	.13	**.30****	-.16	-.00	**-.36****				
11- SDQ-PB Teacher	.04	.11	-.05	-.04	-.02	-.06	.05	-.01	**.27****	**-.37****			
12- SDQ Total difficulties-Teacher	.02	-.12	-.03	.19	.19	**.23***	-.12	.13	**-.27***	**.57****	**-.27***		
13- WISC-IV	.04	.04	-.06	-.12	-.04	-.19	**.25***	**.31****	.02	-.13	.11	-.04	

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Cognitive Function

There were no significant gender differences between boys and girls across groups on WISC-IV and its two sub-tests (*Fs*(1, 94) < 3.09 and *p*s > .05). There were also no significant differences in child age for either the subtests or the total score (*Fs*(1, 94) < 3.09 and *p*s > .05).

There were significant group differences for the total IQ score ($F(2, 93) = 7.46$, $p = .01$), such that there were differences between the CRI and TD. There was also a group difference for the vocabulary subtest ($F(2, 93) = 6.94$, $p = .01$), with the CRI group scoring lower than the other two groups, but there were no differences between the CC and TD groups. The block design subtest showed no significant differences between groups, $F(2, 93) = .92$, $p = .40$. The interaction between groups and gender was not statistically significant (*ps* > .05).

5.5 Discussion

The present study examined emotional and behavioural difficulties (e.g., anxiety and depression), social and self-functioning (e.g., loneliness, pro-social behaviour), the perception of self (e.g., social competence and self-worth) and cognitive ability in a Saudi sample of children aged 8-12 years who were either raised in institutional care from birth, placed into cuddling care in their first year, or resided with their birth parents. Based on existing literature, it was hypothesised that children who live in alternative care (especially institutional care) would report increased mental health difficulties, poorer social functioning, negative self-perception, more behavioural problems, and lower cognitive ability, compared with the control group.

Nearly all of the hypotheses were supported by the self-reported questionnaires, except the BDI-Y. The present results are consistent with the notion that a child's early care experiences are significantly associated with their developmental outcomes. Children raised in institutions were at greater risk of poor mental health, social functioning and self-perception, compared with those who were raised in a family environment, either with cuddled parents placed before the first birthday, or with their biological parents. In addition, children in the CRI reported more symptoms of anxiety and depression, consistent with moderate to high clinical levels, as well as more loneliness and social dissatisfaction. Children in institutional care also

showed lower self-perception and cognitive functioning. With regard to carer and teacher assessments, they both agreed there was no significant effect of the groups on externalising behaviours. However, carers and teachers disagreed in their ratings of prosocial behaviour, as cuddling parents perceived their children to be more pro-social, compared to children in the other two groups. Of particular note was that carers reported the CRI group to show more internalising behaviour and total difficulties compared to the CC group. No effect was found on all subscales and total difficulties according to teachers' reports.

Self-reported scales

In the self-reported scales, CRI reported more symptoms of anxiety compared to the other two groups. In terms of comparison between children reared in institutions, those who never experienced institutional care, and those living with non-biological families, the results are consistent with other studies (Fisher, 2015; Gagnon-Oosterwaal et al., 2012, Jiménez-Morago et al, 2015). Institutionalised children reported more symptoms of anxiety than typically developed and cuddled children. However, the present findings differ from those of other studies with respect to depression symptoms (Ismael, 2009; Ojha et al., 2013), as the present findings did not show a significant difference. It is difficult to explain this result, but it might be related to the children's age, as depression symptoms are not likely to be obvious before late childhood and early adolescence (Kerns & Brumariu, 2014).

Another important finding related to mental health symptoms is that the CC group showed fewer mental health difficulties compared to the CRI group, with rates comparable to those of the TD group. This finding is consistent with research on children who experienced only short spans of institutional care or adversity, and who were placed in permanent family settings at a young age (e.g., Hjern et al., 2018; Jiménez-Morago et al., 2015). The findings, however, contrast with other studies which found that early adoption did not matter in decreasing or increasing the probability of developing mental health issues (Juffer & van Ijzendoorn, 2005). The findings of Juffer and van Ijzendoorn (2005) appear to be related to the comparison of age at adoption, between children adopted either before or after their first birthday. This may explain why the existing findings varied with those of the meta-analysis. The empirical evidence from longitudinal work has shown better

results for children who were adopted at the age of 6 months, compared to children adopted later (Fernyhough, 2003).

The social functioning findings are also consistent with previous research on children who live in institutional care and have a history of difficult early experiences (see Al-Suwaihri, 2010; Ptacek et al., 2011; Rather, 2011). The results in the current study raise the possibility that, compared to other forms of alternative care, children in the CRI group are at a higher risk of developing social functioning difficulties and loneliness. This finding can be interpreted in relation to institutional life, which increases the risk of social isolation and limits social interactions with people other than institutional staff, thereby increasing feelings of loneliness. However, heads and psychologists reported that Saudi institutions provide social programmes and services that help children to integrate into society (see Chapter 3). While these programmes and services are crucial, they may be limited and short-term, and may not substitute for the normal interactions of social life. This also can be confirmed by the CC outcomes, as this group is likely to have the most normal life interactions.

The present findings of lower social competence and self-esteem are in line with previous studies that compared children raised in institutions with children who live with their birth parents (Nsabimana et al., 2019; Palacios et al., 2013; Petranovich, 2015). This speaks to the negative self-perception experienced by institutionalised children, as they feel they are not liked by their peers in schools. Some factors could lead CRI to perceive themselves as socially incompetent and rejected by peers, such as exhibiting annoying or aggressive behaviours, or not following the rules (Rubin et al., 1995). This could make other children not want to play with them. Perceiving such rejection or negative feedback from peers is likely to affect CRI children's self-esteem, as they consequently do not perceive their peers as a source of support (Mota & Matos, 2013).

Furthermore, one unanticipated finding was that CC perceived themselves as less worthy compared to their birth peers. These results differ from Juffer et al.'s (2007) meta-analysis of self-esteem between adopted children and those who live with their biological parents. The findings did not only contradict other research, but are also in contrast with other results in the current study which showed the CC group is well-adjusted in the other scales. Since this difference has not been found elsewhere, it is probably due

to cultural influence. In a collectivistic culture that emphasises the notion of family and the sense of belonging, cuddled children might have the feeling of being neglected by their biological parents, and might lead them to wonder what is wrong with them to be abandoned. Another possible explanation for this could be the link between parenting style and self-esteem. Findings from cross cultural research have concluded that a higher level of overprotection and/or low level of acceptance in parenting styles were linked to lower self-esteem (Herz & Gullone, 1999). However, this needs more research in Saudi culture with regard to children who live with non-biological parents.

Caregivers and teachers reports

The results of this study did find CC groups rated higher in pro-social behaviours than the other groups. Prosocial behaviour indicates that CC voluntarily show behaviours meant to benefit others (Eisenberg et al., 2007). In terms of comparison, these results are consistent with the findings of Spanish samples that included adopted and institutionalised children (Palacios et al., 2013), where adopted children presented more prosocial behaviours, compared to institutionalised children. However, it is somewhat surprising that CC and TD differed significantly. These results were inconsistent with prior empirical work (e.g., Borders et al., 1998) and the theoretical assumption that children living with non-genetically-related carers would display lower prosocial behaviour (Knafo-Noam & Markovitch, 2016). One possible explanation for the present findings may relate to parental status. A recent study (Paine et al., 2020) reported that children living with both parents were reported to demonstrate more pro-sociality compared to those living with one carer. In the present study, over 85% of the CC group live with both parents, compared to 77% of children from the TD group.

As anticipated, CRI showed more behavioural problems compared to the adoptive groups. This finding is consistent with other studies (Al-Kathiry, 2014; MacKenzie et al., 2014). In addition, the higher number of children, including almost one third of the CRI group, were at or above the clinical range. Collectively, the carers' reporting of internalising behaviour problems are in line with the children's anxiety report and the higher prevalence of depression in this group. The results could confirm that institutionalised children are more likely to display poor psychological adjustment, which could in turn serve as a risk factor that enhances poor emotional and behavioural development.

Interestingly, the results of the SDQ differed significantly according to informants. For caregivers, there was a significant difference between groups in terms of prosocial behaviour, internalising problems, and total difficulties. In contrast, teachers did not report any significant difference. This discrepancy in the findings could be a consequence of the context in which each informant sees the child (Stone et al., 2010), as parents and teachers derive their information from different settings (i.e., home, class) (Goodman, 1997). Of note, agreement between raters on any given child's behaviour is commonly found to be low (Miller et al., 2014). It is likely that children behave quite differently at home and at school. Moreover, fewer total primary caregivers assessing institutionalised children and teachers assessing cuddled children took part in this study and some of them provided ratings for more than one child.

Cognitive function

Although CRI were nine points higher in the IQ average scores (93) compared to what reported in the institutionalised children in the meta-analysis with IQ average 84 (van IJzendoorn et al., 2008), they showed lower levels of cognitive ability compared to their peers in the other groups (TD, CC) and children who had never been institutionalised in the same meta-analysis. In addition, CRI showed lower scores in the vocabulary subtest which reflects a similarity with other studies (e.g., Almas et al., 2016) in terms of comparing institutionalised and non-institutionalised children. Previous studies found some significant factors affecting institutionalised children's IQ, such as child's age at entry and assessment, as well as their country's socio-economic level (see van IJzendoorn et al., 2008). Younger children at entry or assessment were found to report more cognitive deficits than older children. The current results seem to be in agreement with the claim that age at placement is a factor that affects intelligence, as all of the children entered institutions soon after birth. Age at assessment was not a significant factor, however, because the results did not reveal any significant difference between younger and older children. These findings further support the idea that institutional care is marked by cognitive deficit (Sheridan et al., 2010; van IJzendoorn et al., 2011). This result also may be explained by the fact that the group care setting, either current or previous, caused negative outcomes (van IJzendoorn et al., 2008). Belsky and Pluess (2011) argued that the lack of cognitive stimulus, especially language, was associated with poor quality of

care in early life, and that a low level of communication within institutions (Asimina et al., 2017) weakens fundamental cognitive and linguistic development.

It is interesting to note that the CC group's results were in line with those of the TD group, showed similar IQ average scores as Romanian children who had a short span in institutional care (< 6 months; Beckett et al., 2006), matched those observed in earlier studies (Waterman et al., 2013), and overall, confirm that cuddling placement is likely to act as a protective factor for cognitive development (van IJzendoorn & Juffer, 2006). It is likely that those children benefit from early environmental influences that grant them access to better educational resources and, in turn, increase their cognitive function (Duyme et al., 1999; UNICEF, 2016). However, it seems important to look at the effect of household income in the CC group, as the results from longitudinal work showed that those who live in higher SES households tended to score higher on cognitive function compared to those in lower income households (UNICEF, 2016).

Although most institutionalised children in this study came from care settings that emphasise family-like design, they showed higher levels of developmental deficits, higher mental health problems, greater loneliness and social dissatisfaction, and lower self-competence, based on both self- and carer-reports. This supports the theoretical assumption presented earlier about latent vulnerabilities (McCrory and Viding, 2015), as children had experienced moving from at least one institution to another and meeting multiple caregivers and staff members with different experiences. There is therefore a greater likelihood of developing maladaptive behaviours in an early institutional placement that persist into the next. It remains important for future work to consider the early history of institutionalised children, in order to understand better the influence of early adverse events in care, such as neglect, that could adversely affect neurocognitive development (Shonkoff et al., 2012). Prenatal experiences and genetic susceptibility should also be considered.

Overall, the current results provide further support for differential developmental outcomes dependent on different care settings. The findings suggest that children in alternative care in Saudi Arabia, in particular those who live in institutions, are at an increased risk of poor psychosocial development. This could result from the uncertainty these children live in,

which might raise the possibility of developing negative ideas about self and others. On the other hand, the CC results imply that children in this group are not only psychologically healthier than their institutional peers, but also similar to those living with biological parents. It appears that the cuddling process in Saudi Arabia was a critical element in decreasing the psychosocial risk associated with being abandoned at an early age. This shows the importance of permanent, family-based care as an early and natural intervention.

Some important limitations need to be considered. First, a few primary caregivers had to assess children in institutional care and sometimes more than one child per caregiver. This may have impacted the child's behaviour scores in the CRI group. Another limitation was that there were too few teachers' responses for the cuddling group because some schools did not complete the questionnaire. Lastly, all children in the CC group in this study know their current status (being cuddled by non-biological parents). However, some other cuddled children who are not part in this study do not know they live with non-biological parents. This might affect the results as those who do not know may reveal different outcomes. Therefore, it is important to bear in mind the possible bias in the current outcomes.

The present findings have important implications for developing future work. Further studies that take these variables into consideration should use a larger sample of cuddled children. This is particularly important because all CC were placed into family care at an early age, and all CRI were placed into institutional care after birth.

5.6 Conclusion

This study set out to determine the psychosocial development of children in alternative care (institutions, adoption). It also provides additional evidence with respect to the effects of being away from one's birth parents. It has found that, generally, early experience plays a significant role in defining development in later life. In addition, children placed into cuddling care early show patterns of development similar to peers raised at home by biological parents. Although the current study is based on a small sample of participants, it offers some insight into developmental outcomes of cuddled children in Saudi Arabia.

6 Chapter Six — Attachment in Saudi Arabia: A Description of the Carer-Child Relationship in Middle Childhood

6.1 Introduction

Attachment theory offers a compelling framework for research in human development as it draws on ethological, biological, cognitive, and evolutionary concepts to explore the development of a selective emotional bond between a child and their primary carer(s), and considers the effects of this bond on a child's life (Levy & Johnson, 2019; Scharfe, 2017).

Attachment universality

One important tenet of attachment theory is that it is a universal, natural instinct for an infant to form a bond with their primary caregivers (van IJzendoorn & Sagi, 2001). This universality hypothesis states that infants signal their needs similarly across cultures in ways that are designed to trigger responses from their primary caregiver(s), thus comprising the basis for the development of an attachment relationship with them (Mesman et al., 2016). In other words, all infants will display attachment-related behaviours (e.g., signalling needs to gain proximity and protection from their caregiver) regardless of their culture (Abrines et al., 2012; Benoit et al., 2001).

The universality hypothesis has been tested and reported in different cultures and cultural contexts, in addition to North American and European cultures, where the attachment concept was developed and has been extensively examined. Ainsworth (1976), for instance, started her observations in Uganda, describing attachment development in multiple-caregiver relationships. For example, Ainsworth observed that in cultural situations where the primary carer (usually the mother), shared responsibility with other adults and older children, infants were able to form an attachment relationship with the primary caregiver. Research in Japan, China and other Asian nations also found that young children form attachment relationships with their primary caregiver(s) (van IJzendoorn & Kroonenberg, 1988). In addition, data from Chile (Valenzuela, 1997), Puerto Rico (Carlson & Harwood, 2003) and Columbia (Vaughn et al., 2007), as well as South Africa and Mali,

showed a higher rate of attachment security in low-risk groups, thus confirming the universality concept of child-carer attachment development across cultures (Minde et al., 2006; True et al., 2001).

It is important to note that children's 'instinct' to form selective attachments is argued to be a universal phenomenon (e.g., Rothbaum et al., 2000). Moreover, the cross-culture literature (e.g., van IJzendoorn & Kroonenberg, 1988) argues that the rates of different attachment styles in children – classified as secure, avoidant, resistant, and disorganised – vary. For example, a meta-analysis that consisted of approximately 2,000 children from eight different (mostly Western) countries showed that 21% of children developed an avoidant attachment style, compared to 12% classified as resistant (van IJzendoorn & Kroonenberg, 1988). In contrast, Archer et al. (2015) measured attachment style in China with 61 Chinese infants using the strange situation procedure (SSP), and their results showed a higher prevalence of insecure-resistant compared to the insecure-avoidant styles. Similar findings by Jin et al. (2012) also showed that 1% of a Korean sample was classified as avoidant, compared to 18% defined as resistant, further confirming cross-cultural variance in the findings reported on attachment insecurity. Both Archer et al. and Jin et al.'s studies provide important insights into the cultural differences that may reflect the diverse adaptive child-carer behaviours embedded in individualistic versus collectivist cultures (Harwood et al., 2001).

Further research has considered the relationships on a child's attachment formation in different cultures (Keller, 2016). Research has predominantly considered the proposition that attachment reflects the relationship between the child and their primary caregiver, a phenomenon that emphasises the Western concept of individualism. This premise comes from the first, most commonly used attachment assessment method, SSP (Ainsworth & Bell, 1970; Ainsworth et al., 1978), as well as the Attachment Q-sort (AQS, a method developed to capture the attachment behaviour of children aged 18-48 months; Waters & Deane, 1985). Focusing on the relationship between child and primary carer means neglecting to capture attachment in cultures in which it is common for people other than parents (e.g., an aunt, older siblings) to take care of the child.

Early work by Ainsworth et al. (1978) was conducted in a cultural context first considered as collectivistic (Uganda), where many people, in

addition to the primary carers, take part in the rearing of the child. Although the sample was small, this work does however provide the basis of capturing attachment behaviours for later research, in particular in the Baltimore study (LeVine, 1969; Mesman et al., 2016). Moreover, further studies were conducted in multiple-caregiver cultures following Ainsworth's work (e.g., in South Africa by Tomlinson et al., 2005; in Indonesia by Zevalkink, 1997) to provide further insight into attachment formations in different cultures. Data from these studies captured the relationship between primary carers and children.

Attachment theory argues that over time, infants gradually internalise their attachment experiences. These internal representations of self and other guide an individual's behaviour and expectations in relationships throughout development (i.e. internal working models, Bowlby, 1969). To assess internal models of attachment, several further methods were developed in addition to the laboratory observational method (SSP), such as interviews (George et al., 1985) and questionnaires (Hazan & Shaver, 1987) to explore and assess these relationships across different developmental periods. These representational measures of attachment have been used across different populations and cultures (Jewell et al., 2019).

Attachment and Middle Childhood

Researchers have debated how attachment continues through to middle childhood – between 8-12 years – and beyond. Specifically, they investigated whether a child's attachment behaviour (e.g., proximity and comfort-seeking following separation) in this latter phase of development reflects attachment beyond infancy. To put it another way, do the pre-verbal methods for assessing and studying attachment relationships (e.g., SSP) link to the child's internal working model (IWM) of self, others, and relationships past infancy?

Boldt et al. (2015) comment that research on attachment reveals little about the stage of middle childhood, as evidenced by the large number of attachment measures for infancy and adulthood (Jewell et al., 2019). Some researchers have argued that middle childhood is an extension of the previous developmental phases, and hence, there are no explicit differences between this phase of development and earlier phases (Kerns et al., 2005). For example, a well-known method to assess attachment is the story stem assessment profile (SSAP: Hodges et al., 2004), developed to assess children's

attachment representations from 4-9 years old, an age range which spans two developmental stages (early and middle childhood). However, some researchers propose that middle childhood is characterised by features that distinguish it from other developmental phases. Specifically, they argue that any conceptualisation of attachment during middle childhood needs to reflect the emergence of new relationships to peers, which on average comprise 30% of social interactions during that time (Gifford-Smith & Brownell, 2003; Kerns et al., 2005), in addition to other significant people in the child's life such as siblings and teachers.

The significant change in social life during middle childhood is associated with children spending more time away from home (e.g. at school), which promotes changes in how attachment relationships are 'managed'. For instance, children might continue to rely on the availability and responsiveness of caregivers, and maintain their proximity using mechanisms such as language and social cues (having a conversation, or acting in a socially acceptable way). Bowlby labelled this a "goal-corrected partnership", where the child is likely to have the ability to maintain the relationship with the adult (Colin, 1996, p. 17) by effectively negotiating the balance between their drive for more autonomy and their need for security and safety. More precisely, the child's IWM becomes more advanced, allowing them to manage all-important social bonds and self-assertion.

Researchers have developed different methods to capture attachment in the latter stages of children's development, such as self-reporting measures (e.g., Attachment Security Scale by Kerns et al., 1996; the Preoccupied and Avoidant Coping questionnaire by Finnegan et al., 2008). The 'talk', or narrative approach via interview is another method that relies on verbal communication. The aim of such interviews is to assess the child's thoughts and interpretations of self, others, and important relationships, using narration (Fonagy & Target, 1997). It is argued that such interviews reflect the child's reflective function (RF), which, according to attachment theory, captures different psychological processes, such as: the ability to take a developmental perspective when looking back and considering past and present experiences; mentalisation, such as considering their own and other people's thoughts and feelings; and the ability to consider a diversity of feelings. These processes can help to shed light on a child's behaviours and

reflections on internal representations of self, others and relationships with important others (Kriss et al., 2012).

The method of narration of past or current experiences is unique compared to other methods of measuring attachment (e.g. observation) in that it allows children to recount their own stories. Moreover, the narrative method emphasises content, giving the child an opportunity to show that they are able to reflect on and address any conflict within the narrative itself (Robinson, 2007). The narrative technique has been applied in different ways, most recently to capture attachment relationships (e.g., Borelli et al., 2010; Borelli, et al., 2016; Brumariu et al., 2011). Interviews also portray different aspects of the discussion, such as the coherence of narration (i.e., the truth of a story), to fully capture what was said, spoken, or voiced during the interview (Kriss et al., 2012). It is argued that coherence portrays the latent representations of attachment, regardless of the child's verbal ability (see Shmueli-Goetz et al., 2008; Target et al., 2003). Narrative coherence was originally considered by the linguist Grice (1975), who characterised narratives as coherent if they were truthful (i.e. if there was evidence to support what was said), succinct and complete, clear, brief and orderly, and if the information provided was relevant. Main and Goldwyn (1998) conceptualised coherence as: evidence of consistency across the narrative; connectedness of thought across different parts of the discourse; and content being meaningful to context (Beijersbergen et al., 2006). In other words, coherence reflects the level of narrative truth, where the child provides convincing evidence of what they are saying, and a listener is able to follow. Importantly, attachment research indicates a positive correlation between higher coherence scores and secure attachment representation (Moss et al., 2009; Zaccagnino et al., 2015).

The Friends and Family Interview (FFI) is a narrative approach designed to assess a child's attachment during middle childhood and adolescence (Steele et al., 2015; Steele & Steele, 2005). The method is adapted from the Adult Attachment Interview (AAI) developed by George et al. (1985) but scaled to be developmentally appropriate to middle childhood and adolescence (Kriss et al., 2012). It uses a semi-structured approach to gain details about the child and their significant relationships (i.e., primary carers, best friends, siblings, and teachers), and to examine the accuracy of narration. The fact that the FFI considers close relationships with a number of important others

across different social contexts – such as relationships with siblings, peers, and teachers – makes it a promising tool for addressing possible cultural variance in the development of attachments. In addition, the interview method also encourages children to narrate stories about themselves and how they reflect on their self-image. It is also noteworthy that the FFI is commonly used in cross-cultural research (Stievenart et al., 2012). It has been successfully used in studies conducted in different countries like Chile, Italy, Romania, and Spain; across different groups including typically developing children and adoptees; and in different ethnic samples, such as Asian and Caucasian children and adolescents (see Abrines et al., 2012; Barcons et al., 2012; Escobar & Santelices, 2013; Pace, 2014). Importantly, the FFI demonstrates a significant level of cross-cultural validity when compared to other middle childhood and adolescence attachment measures (Jewell et al., 2019).

The aim of the current study is to explore attachment relationships through children's narratives in Saudi Arabia using the FFI approach. To the author's knowledge, no such data looking at attachment in these different contexts currently exists. The FFI was used to assess attachment in middle childhood and provide a first description of the nature of the attachment representations in Saudi Arabian children. Accordingly, this study investigates the narratives of children's attachment relationships in middle childhood, and compares these across three different groups of caregiving contexts: children raised at home with biological parents, children raised in a family home of non-biological parents, and children reared in institutional care settings.

6.1 Aim and Objectives

This study aimed to explore children's attachment representations in middle childhood (8-12 years old) in Saudi Arabia. Specifically, the study assessed attachment representations in terms of attachment classifications (secure, dismissing, preoccupied, and disorganised) and narrative coherence derived from the Friends and Family Interview (FFI) for three different groups of children: those who live with their biological parents and are defined as 'typically developed' (TD); those who live with non-biological parents, referred to as 'cuddled children' (CC; described in chapter 1); and those reared in institutional care (CRI). The present study also considers associations between attachment security and other variables including child's gender, age, and total IQ scores. Additional scales of the FFI explored in this study include

reflective function (RF), and evidence of safe haven and secure base, along with adaptive responses. Moreover, correlations were explored between attachment security and RF, and between narrative coherence and verbal IQ.

It was anticipated that the data would confirm the 'universality hypothesis' (i.e., children from all groups will successfully develop an attachment relationship with a primary caregiver), and through showing a higher rate of secure attachment classification compared to insecure classifications among the TD and CC groups, as hypothesised by attachment theory (the 'normativity hypothesis'; see Chapter 2). In addition, it was expected that there would be a significant difference in the rates of secure attachment classifications between the children reared in institutions (CRI) compared to the other two groups reared in family settings (TD and CC). Moreover, the study further investigated the role of gender, age, and total IQ. It was also anticipated that the TD and CC groups would show increased evidence of RF and evidence of safe haven / secure base as well as adaptive response, compared to children who live in institutions. It was foreseen that RF would show significant correlation with attachment security. In addition, it was anticipated that narrative coherence would not significantly correlate to a child's verbal ability.

6.2 Method

6.2.1 Ethics

Both the University of Southampton's Research Governance body and the Psychology Ethic Committee approved this research. The Ministry of Human Resources and Social Development and the Ministry of Education in Saudi Arabia approved this research project, granting permission to work with children across the three stated groups (see Chapter 5).

6.2.2 Participants

This study utilises the same sample as described in Chapter 5, although the numbers vary slightly. Thirty-six children (boys: n = 19) were classified as having lived with their biological parent(s) since birth, placing them in the 'typically developed' (TD) group, with a mean age of 9.85 years (SD = 1.35, range = 8-12 years old); eight children lived with only their mothers, whilst the other children lived with both biological parents. The 'cuddled children' (CC) group included 25 children (boys: n = 14) with a mean age of 9.04 years

(*SD* = 1.47, range = 8-12 years old) while three of the children from the original sample did not do the interview. Due to parental abandonment, all children had been placed into institutional care before being cuddled, soon after birth. Twenty-two of the children had been housed with two parents, whilst three had been placed with single mothers since their first year of life, usually at or before sixth months of age. Almost all caregivers (*n* = 24) in the CC group reported that their children had been breastfed by the cuddling mother or a cuddling family relative (e.g., the mother's sister). All CC were aware of their familial status (i.e., being cuddled by and living with non-biological parents).

With regards to children reared in institutions (CRI), 32 children (boys: *n* = 18) were recruited with an age mean of 9.75 years (*SD* = 1.56, range = 8-12 years old) from three mixed-gender, home-based institutions, and one single-gender, ward-based institution (see Chapter 3). As one participant did not want to complete the attachment interview, they were excluded, bringing the final total participant number to 31. All children had been placed into institutional care because of abandonment at birth, and they had all experienced a minimum of one move to another institution. All children had stayed with their primary carers for a minimum of 18 months, all primary carers were female and institutionalised children call them "mother".

6.2.3 Measures

Demographic information. A demographic information form was used to gather details about each child's background (see Chapter 5).

Attachment interview. The FFI was administered to measure attachment representations, and scored according to the FFI scoring manual (Steele et al., 2015; Steele & Steele, 2005). The FFI is a narrative approach used to assess the quality of attachment and relationships in middle childhood and early adolescence (8-16 years old). The interview is semi-structured and considers how children develop attachment through experiences with caregivers, peer relationships, and self-construction.

The interview protocol includes 28 statements, categorised into four sections: *self*, which asks the child to talk about themselves (e.g., "What would you say is the best thing about yourself?"); *home*, which asks the child about their relationships at home with parents and siblings (e.g., "What's it like

when you and your mum are together?"); *friends*, where the child talks about their best friend at school (e.g., "Who would you say is your closest friend?"); and, lastly, *teachers* (e.g., "What do you like best about this teacher?"). Whilst interviews elicit children's own themes, categorical and dimensional codes can be applied to map out their narratives and identify global attachment styles (Steele et al., 2015). The aim of the FFI is to classify children into one of four attachment styles: secure-autonomous, insecure-dismissive, insecure-preoccupied, and insecure-disorganised (Pace et al., 2015; Psouni & Apetroaia, 2014).

In addition to assessing attachment classifications, the FFI has eight other measurement scales: (i) Coherence; (ii) reflective function RF; (iii) sense of safe haven / secure base; (iv) evidence of self-esteem; (v) peer relations; (vi) sibling relations; (vii) anxieties and defences; and (viii) differentiation of parental representations. Each child received a score for each scale according to the extent to which their narrative showed evidence of any of the measured constructs; 1 = no evidence; 2 = mild evidence; 3 = moderate evidence; 4 = marked evidence (Steele et al., 2015). The child was also assigned an attachment classification based on the entire narration. For the designation of attachment classifications, information from across the measurement scales was used (see below).

- Coherence, which reflects a child's capacity to produce a cohesive and credible account of their self-construct, their attachment relationships, and their peer relationships. This measure is global scale (see Grice, 1975), and depends on qualities elicited throughout the entire interview. This involves providing convincing evidence (*truth*), the right amount of detail (*economy*), presenting relevant information (*relation*), and displaying an age-appropriate level of politeness and attention (*manner*). Each aspect is rated separately to provide an overall coherence.
- The construct of RF is measured through the subscales of: developmental perspective, where the child compares their present views and emotions about a subject with past views; theory of mind or mentalisation, which is intended to evaluate the child's thoughts and emotions (in regard to other people such as father, mother, friends, siblings, and teachers); and the diversity of feeling (a capacity to reflect

and understand different negative and positive emotions that are embedded in self and significant relations);

- The evidence of a sense of safe haven through parental emotional support in distressed moments, and a secure base through encouragement to explore the world;
- Adaptive response is part of the differentiation of parental representations scale, and refers to evidence of how the child reacts when distressed.

To ensure the interview questions reflect the original source, the questions were forward and back translated and were checked by two native English speakers who were PhD students in psychology at the time. Cronbach's alphas for RF and evidence of safe and secure base were > .70.

Attachment classifications were derived in the following way (according to Steele et al., 2015). Secure children show higher coherence, the capacity of needing or relying on others, acceptance of self, higher developmental perspective, and adaptive response. A child classified as insecure-dismissing is self-portraying as strong and independent, but showing low coherence, in particular low relation and economy, with lower developmental perspective and adaptive response. Preoccupied classification is usually allocated where the story represents overdependence on or constant display of feelings against the parents, such as frustration or repetitive blame. Preoccupied children typically show lower coherence, in particular low relation and economy (too much detail), as well as lower developmental perception and adaptive response. Children with disorganised classification usually show contradictory or incompatible strategies, with some references to unsettled, traumatic, or frightening experiences. Those children show low coherence (low truth, relation, manner), low developmental perspective, and low adaptive response.

Scoring and coding the interviews. All interviews were conducted by the researcher and audio recorded. Later, the recordings were transcribed for analysis. The interview coding system required the researcher to undertake a two-day training course with the authors of the FFI interview, and then pass a reliability test to ensure knowledge of correct usage. To ensure the attachment classifications were reliable, two independent coders (the trained researcher and one other person) coded the transcripts based on the FFI manual. As the reliability coder had not attended the original training, she

was trained by the researcher with training similar to the original. Then, 20% of the interviews from the Saudi sample were randomly selected and examined across groups and genders. Both coders agreed on attachment classifications in 83.3% of the interviews (Kappa = .73).

IQ. Verbal and nonverbal ability were assessed in this study using the Wechsler Intelligence Scale IV (Geddes, 2003), developed for children between 6-16 years of age. The scale generated one total score for cognitive ability, and separate scores for verbal and non-verbal abilities. The Arabic version's vocabulary and block design subtests were administered (Melika, 2007), and the total scores and verbal ability subtest were included. The vocabulary subtest generated scores showing the child's level of ability to form concepts, knowledge and usage of words, and verbal fluency. The scale's descriptive data, including vocabulary subtest and total score, are reported in Chapter 5.

6.2.4 Approach to Analysis

There were a number of steps comprising data analysis for attachment. First, preliminary analyses were used to provide descriptive data for all attachment classifications (secure, dismissing, preoccupied, and disorganised), and narrative coherence for all groups. Second, insecure classifications were combined to compare data across groups in terms of secure/insecure distinction. Third, a chi-square test was conducted to test the association between gender and attachment security for each separate group. Fourth, logistic regression analysis was conducted to determine whether the child's age or IQ had an effect on attachment security. Fifth, descriptive statistics were presented for evidence of RF (developmental perspective, theory of mind (mentalisation), diversity of feeling), evidence of safe heaven/secure base, and adoptive response. Sixth, correlational analysis was conducted to test the association between RF and attachment security. Finally, a correlational analysis was conducted to test the relationship between narrative coherence and the WISC-IV vocabulary subtest.

6.3 Results

Attachment outcomes

Table 6-1details attachment representations and narrative coherence for all three groups. The resultant distribution of attachment representations of children showed that over 50% of TD and CC children were classified as

secure, while 23 % of CRI were classified as secure (all of them came from the home-based institutions).

Table 6-1

Descriptive data (mean, standard deviation (SD), scores range, percentage) of attachment (secure, dismissing, preoccupied, and disorganised classifications), as well as an insecure classification (the mean of the transformed dismissing, preoccupied, and disorganised classification variables) and narrative coherence for all three groups

Groups		Secure	Dismissing	Preoccupied	Disorganised	Insecure classification	Narrative coherence
TD	Mean	2.62	2.06	2.31	1.16	1.54	2.50
	SD	.75	.74	.57	.57	.37	.65
	Range	1-4	1-4	1-4	1-4	1-2.5	1.5-4
	Percentage	56%	25%	14%	5.6%	44%	
CC	Mean	2.52	2.14	2.32	1.12	1.66	2.72
	SD	.70	.75	.57	.41	.40	.55
	Range	1.5-4	1-4	1-4	1-2.5	1-2.83	2-4
	Percentage	52%	28%	20%	0	48%	
CRI	Mean	1.98	2.16	2.45	1.45	1.78	2.19
	SD	.79	.82	.62	.88	.44	.58
	Range	1.5-4	1-4	1.5-4	1-4	1-2.67	1.5-4
	Percentage	23%	32%	29%	16%	77%	

Because the TD and CC groups violated the assumption of sample size in disorganised classification, the insecure classifications (dismissive, preoccupied, and disorganised) were collapsed together into one category of 'insecurity'. Therefore, the attachment variable has two levels (secure versus insecure). A chi-square test of homogeneity was conducted between group (TD, CC, CRI) and attachment (secure versus insecure). All expected cell counts were greater than five. There was a statistically significant difference between groups (p = .015). Post hoc analysis involved pairwise comparisons using the z-test of two proportions with a Bonferroni correction. The rate of children in the TD group classified as secure was significantly greater than the rate in the CRI $p < .05$, but was not different to the rate in the CC group. Correspondingly, the rate of insecure TD children was significantly lower compared to CRI $p < .05$, but not compared to the CC group (see Table 6-2). CC and CRI showed no significant difference in both secure and insecure classifications.

Table 6-2

Post hoc analysis to indicate the significant difference between groups in Attachment and chi-square descriptive data

			Group				Chi square test
			TD	CC	CRI	Total	
Attachment	Secure	Count	20_{a}	$13_{a, b}$	7_{b}	40	$\chi^2(2) = 8.38$,
		% within group	56%	52%	23%	44%	$p = .015$.
	Insecure	Count	16_{a}	$12_{a, b}$	24_{b}	52	$BC = .008$
		% within group	44%	48%	77%	56%	Cramer's V = .302

a and b = There is a statistically significant difference in proportions between TD Group and CRI Group ("a" versus "b"), but there is no statistically significant difference in proportion between TD Group and CC Group ("a" versus "a") and CC Group and CRI Group ("b" versus "b"). BC = Bonferroni-corrected alpha. Cramer's V = to test the effect size.

Association between gender and attachment security

Because of the low cell counts for some of the insecure attachment classifications (a cell count of less than five), the association with gender was assessed using the binary distinction of secure versus insecure. To test for any gender effects, a chi-square test was used for both TD and CC groups. A Fisher's Exact test was conducted for CRI children because two expected cells with less than five cases were observed. All results showed no statistically significant association between attachment security/insecurity and child gender (see Table 6-3).

Table 6-3

Cross-tabulation of gender and attachment (secure vs. insecure) for all groups

			Gender		
Groups			Boy	Girl	*p*
TD	Attachment	Secure	10.6	9.4	.70
		Insecure	8.4	7.6	
CC	Attachment	Secure	7.3	5.7	.82
		Insecure	6.7	5.3	
CRI	Attachment	Secure	4.1	2.9	$.41_{a}$
		Insecure	13.9	10.1	

a = it shows the Fisher's Exact test results.

Predicting attachment security

Multiple logistic regression analyses were conducted for each group separately to determine whether the child's age at assessment and/or IQ score had a significant effect on attachment security. Some authors suggested

a minimum sample size of 100 to run regression analysis (e.g., Miles & Shevlin, 2001). However, others proposed a total of 10 participants per predictor as a minimum sample size to ensure no positive or negative bias in regression (Peduzzi, et al., 1996; Vittinghoff & McCulloch, 2007).

Linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box-Tidwell (1962) procedure. Based on this assessment, all continuous independent variables were found to be linearly related to the logit of the dependent variable. There was one standardised residual with a value of 2.06 standard deviations for the institutionalised group, which was kept in the analysis. The logistic regression model was not statistically significant, for TD $\chi^2(2) = .54$, $p = .76$, for CC $\chi^2(2) = 1.50$, $p = .47$, for CRI $\chi^2(2) = 1.99$, $p = .37$. None of the predictors was statistically significant (as shown in Table 6-4).

Table 6-4

Logistic regression predicting likelihood of attachment security based on children's age at assessment time and IQ scores for each group

Groups		*B*	S.E.	Wald	*df*	*P*	Odd Ratio	95% CI for Odd Ratio	
								Lower	Upper
TD	Age	-.08	.26	.09	1	.75	.92	.55	1.53
	IQ	-.02	.03	.31	1	.57	.98	.91	1.04
	Constant	2.58	3.85	.44	1	.50	13.25		
CC	Age	.23	.29	.63	1	.42	1.26	.71	2.22
	IQ	.04	.04	.98	1	.32	1.05	.95	1.15
	Constant	-7.01	6.00	1.36	1	.24	.01		
CRI	Age	-.15	.29	.25	1	.61	.86	.47	1.54
	IQ	-.06	.04	1.80	1	.18	.93	.85	1.03
	Constant	9.04	6.25	2.09	1	.14	8460.94		

FFI reflective function, evidence of safe haven / secure base and adaptive response

Data presented in Table 6-5 shows the percentage of children who showed no/mild/moderate or marked evidence of RF, evidence of safe haven/secure base, and adaptive response for the three groups. For a child's ability to assume the mental perspective of significant people, over 50% of TD and CC groups showed moderate to marked evidence, reflecting a child's clear narrative portrayal of caregivers and significant others' availability

and/or proximity, represented in the child's mentality. In contrast, the greatest proportion of CRI children showed high rates of mild evidence of these scales. Furthermore, more than 50% of the TD and CC groups had been able to grasp diverse feelings about themselves and the people around them, while over 50% of CRI showed absent to mild evidence in this domain.

Additionally, over 50% of TD and CC children showed moderate to marked evidence of mothers as a 'safe haven' and a 'secure base', and reflective of adaptive and age-appropriate responses to distress. Interestingly, lower proportions of children were coded as showing marked or moderate evidence of thinking of fathers as a 'secure base' or 'safe haven' in both TD and CC groups. Over 50% of CRI showed mild evidence on these scales.

To examine the correlation between attachment security and the RF composite, Pearson product-moment and Spearman correlation analyses were conducted. As was hypothesised, the correlation was significant in both tests (r (92) = .72, p = .001; r_s (92) = .73, p = .001, for Pearson and Spearman correlation, respectively).

Coherence and verbal ability

The relationship between children's narrative coherence and verbal ability was checked to ensure the former was not impacted by the latter. Therefore, Pearson product-moment and Spearman correlation analyses were conducted between the narrative coherence and the WISC-IV vocabulary subtest. As was hypothesised, the correlation was not significant in both tests (r (92) = .12, p = .24; rs (92) = .11, p = .27, for Pearson and Spearman correlation, respectively) and even when looking at each group individually, $p > .05$. Such findings show that the children's narrated stories represent both RF and evidence of safe haven/secure base, as well as the adaptive response. The results demonstrate that not all children's narration was affected by their verbal ability, which is consistent with the notion of greater coherence reflecting an indicator of security across all samples and genders.

Table 6-5

Percentages for FFI data that shows reflective function elements (developmental perspective, mentalisation, and diverse feelings), safe haven/secure base for both parents, and adaptive response for all groups

	TD				CC				CRI			
	Absent/no evidence	Mild evidence	Moderate evidence	Marked evidence	Absent/no evidence	Mild evidence	Moderate evidence	Marked evidence	Absent/no evidence	Mild evidence	Moderate evidence	Marked evidence
Reflective function (RF)												
Developmental perspective	2.8	27.8	44.4	25	4	32	52	12	6.5	58.1	29	6.5
Child can assume mental perspective of:												
Mother	2.8	27.8	50	19.4	4	40	48	8	6.5	54.8	35.5	3.2
Father	10.7	28.5	50	10.7	8	36	44	0	N/A	N/A	N/A	N/A
Best friend	19.4	19.4	47.2	13.9	12	28	48	12	35.5	29	35.5	0
Sibling(s)	20	22.8	46	11.4	8	32	40	4	25.8	48.4	22.6	3.2
Teacher	5.6	27.8	47.2	19.4	16	32	44	8	25.8	41.9	29	3.2
Child can comprehend varied feelings in different relationships of:												
Self	5.6	27.8	50	16.7	0	20	60	20	9.7	35.5	45.2	9.7
Mother	5.6	27.8	52.8	14	4	32	56	8	19.4	41.9	38.7	0
Father	7.1	35.7	50	7.1	13.6	40.9	45.5	0	N/A	N/A	N/A	N/A
Friend	8.3	25.0	50	16.7	8	40	44	8	6.5	45.2	48.4	0
Sibling	19.4	19.4	47.2	14	10	35	45	10	12.9	35.5	45.2	6.5
Evidence of safe haven / secure base:												
Mother	14	25	33	28	4	44	44	8	16.1	58.1	25.8	0
Father	18.5	41.3	38	3.4	9.5	42.9	38.1	0	N/A	N/A	N/A	N/A
Adaptive response	14	27.8	41.7	16.7	4	44	40	12	12	58.1	29	0

6.4 Discussion

The present study aimed to explore the attachment relationships in children of Saudi Arabian culture. This study interviewed three groups of children aged 8-12 years, using the Friends and Family Interview (FFI) for the purpose of determining a profile of attachment in children growing up with their biological families, and to compare this pattern to groups 'cuddled' early in development, or who have lived in an institution since birth. Several elements were derived from the existing cross-cultural literature to examine attachment in the current sample, and to compare the findings with the globally-reported profiles. The association between the child's narrative and verbal ability was examined to ensure the given details in the interview reflected attachment processes and were not impacted by the child's verbal intelligence (Bakermans-Kranenburg & van IJzendoorn, 1993; Shmueli-Goetz et al., 2008; Target et al., 2003).

The current study found that children who lived with biological parents (TD), and those who had been adopted as babies and had lived with non-biological parents (CC), showed a higher prevalence of attachment security compared to those who lived in institutional care. In the TD and CC groups, over 50% of children were categorised as secure. Considering the profile within group, children reared in institutions (CRI) showed a higher rate of attachment insecurity, and of dismissing and preoccupied classifications in particular. However, the differences between groups are driven by patterns of preoccupied and disorganised attachment representations. Gender, age, and IQ showed no significant effect on attachment security. Moreover, children in the TD and CC groups were able to show evidence of RF and evidence of the core component of attachment theory: the evidence of safe haven/secure base of mothers as approachable and available. This finding indicates that children in the TD and CC samples were more likely to pursue the mother as the primary caregiver when in trouble or wanting to explore the world. In contrast, the CRI group displayed varying signs of mentalisation, diversity of feelings, and evidence of safe haven/secure base as well as adaptive response. Most children in this group showed only mild evidence of RF, as well as only some ability to mentalise and comprehend varied feelings in different relationships, and developing only some expectations of caregivers' responsiveness.

The rates of secure classification in the TD group were similar to those reported in Psouni et al. (2020) using the same method (FFI) in a typically developed group in middle childhood, and similar to those reported in the meta-analysis examining attachment among adolescents in non-clinical samples using the Adult Attachment Interview (AAI) method (Bakermans-Kranenburg & van IJzendoorn, 2009). While the findings for the CC group differ from the profiles presented by Barcons et al. (2012), who reported that almost 59% of adopted children were classified as secure, the present findings on rates of secure classification in the CC group are consistent with earlier studies, such as the Romanian adoptees' study (Groza et al., 2012) and the Italian sample that included both domestic and international adoptees (Pace et al., 2013), both of which used the FFI to capture attachment relationship. This group's results support the evidence that early cuddling or adoption and breastfeeding in Saudi Arabia could contribute to an increase in a child's likelihood to develop attachment security, as shown in the existing literature (Gribble, 2006).

As was hypothesised, children who live in institutional care showed higher rates of attachment insecurity when compared to the other two groups. The findings of the current study are consistent with those of Lionetti et al.'s (2015) meta-analysis, and give further evidence for the association between institutional care and the increased likelihood of developing attachment insecurity reported in the existing literature. An explanation of these results would be as what Vorria et al. (2003) suggested, that institutionalised children experience difficulties in establishing attachment relationships with new caregivers. Importantly, however, almost a quarter of CRIs showed a secure attachment classification. This could be linked to their care type, since they all came from home-based institutions (as described in Chapter 3) that offer a more consistent caregiving style than other institutional types. This was evident also in the literature (Fox et al., 2017; The St. Petersburg-USA Orphanage Research Team, 2008), and suggests that the care structure and programmes could be important mediators for the development of attachment relationships in children in care.

The current results support the stated hypotheses – that there was a higher prevalence of attachment security in low-risk samples (Mesman et al., 2016), similar to those seen in studies that utilise a talk approach. However, the attachment security rate was marginally below the norm reported in other

studies that showed 60% or greater in normative samples (e.g., Shmueli-Goetz et al., 2008; Van Ijzendoorn et al., 1999). In addition, one unanticipated finding was that the CC group showed a comparatively high rate of insecure attachment classifications (48%), despite a lower early life risk due to being placed into a cuddling home as a baby.

The rate of secure attachment among TD and CC groups being lower than that found in the normative data was unexpected; other possible explanations shall now be offered. One possibility is that such findings are related to the diverse socio-economic status of certain children from both TD and CC groups. Some studies that tested attachment have found that an increased rate of insecure classifications was related to socio-economic factors such as educational level and household income (e.g., Rawatlal et al., 2015). This study surveyed only the level of caregivers' education, but found that some primary caregivers had achieved only high school educational level (see Chapter 5), and this might explain the increased rate of insecure attachment. Some authors have speculated that attachment outcomes could be related to the measure's sensitivity to cultural issues, which could increase the rate of insecurity classifications (Groza & Muntean, 2015). This claim could be empirically evident, as some studies, including those using cross-cultural data, reported higher rates of insecure attachment classification when using representational attachment assessments, compared to those using behavioural assessments (Lionetti et al., 2015).

The findings revealed a lack of gender difference in all groups. Previous research offers mixed findings with respect to gender effects in middle childhood when using various methodologies (Bakermans-Kranenburg & van IJzendoorn, 2009). Moreover, neither age nor IQ predicted attachment security in the present study. The results for IQ are inconsistent with findings from other studies which reported associations between attachment security and higher IQ in children growing up in typical homes (Smyke et al., 2010; Stievenart et al., 2012; van IJzendoorn et al., 1995). These results could be explained by the way data was analysed in the current study, i.e., analysing attachment as secure versus insecure, instead of looking at the relations between attachment classifications or organisation (organised versus disorganised) and IQ scores.

The results for institutionalised children regarding age at assessment partly differed from Lionetti et al.'s (2015) meta-analysis, which found age at

assessment as a moderator of attachment insecurity. This is likely due to this study focusing on results for children raised in Eastern European countries where institutional ecology and atmosphere has been reported as poor (Langton, 2006). Moreover, a specific association between age and disorganised attachment was found, although the current study had few children classified as disorganised. In addition, the children in Lionetti et al.'s study were younger than those in the current study. With regard to cognitive function, the results showed some consistency with the BEIP data of institutionalised groups (Smyke et al., 2010), as cognitive function at age 3.5 years old among institutionalised children did not predict attachment security.

The significant relationship found in this study between higher attachment security and RF confirmed the theoretical assumption proposed by Fonagy and Target (1997) that there is a meaningful association between carer-child relationship and the child's emerging representative thinking. Moreover, it is consistent with empirical evidence that reports a significant relationship between attachment security and RF (see Fabiola et al., 2020; Slade et al., 2005). This suggests that RF could be a reliable predictor of attachment (security). Children who developed early attachment security were more able to represent their own and others' mental perspectives, which successively encourages improvements in mentalization skills in later childhood (Fonagy et al., 1991).

It is important to consider some of the current study's limitations. Firstly, there is a need to use caution whenever a small research sample is concerned. Consequently, future research on attachment relationships in middle childhood in Saudi Arabia should use larger samples to test whether the current findings can be replicated. Secondly, because of the low number of children classified as disorganised, it was not possible to examine the effect of this classification on certain variables, such as age and IQ.

In summary, the current study aimed to explore attachment representations in children in Saudi Arabia and offer evidence of the attachment hypotheses, including data on attachment classifications and different elements considered important facets of attachment representations (evidence of RF, safe haven/secure base, and adaptive response). Importantly, attachment representations were compared across children growing up in different care settings in Saudi Arabia. Children raised in permanent family care (with birth, or cuddled families) showed higher rates of secure (versus

insecure) attachment. Consistent with previous findings on children in high-risk environments, the current findings showed that children in Saudi Arabia growing up in potentially high-risk environments (i.e., institutional care) are more likely to show attachment insecurity (Katsurada, 2007).

These findings are of high importance to decision makers in social care and child protection agencies in Saudi Arabia, and support the current efforts made in Saudi Arabia to follow recommendations by placing high-risk children into a sensitive family unit (Chapter 3; United Nations, 1989). Further study with an additional focus on younger children is also recommended, with a view to looking at attachment behaviours to provide a profile of attachment relationships and to look in more depth at the carer-child tie across different caregiving types and different developmental periods. These studies should include socioeconomic status (household income, parental health, marital status). Moreover, it is recommended that future studies include a carer-child dyad assessment, and conduct attachment research longitudinally to offer a better understanding of attachment quality and representations across different measures and ages in Saudi Arabia.

6.5 Conclusion

The present study investigates the concept of attachment in Saudi Arabian children using a narrative approach. Attachment representations are compared across three groups of children growing up in different care settings: living with their biological family, being 'cuddled', or growing up in institutional care. The results show a higher rate of secure attachment classification for children growing up in permanent family care. In contrast, the insecure attachment classifications are higher for children reared in institutions. A child's gender, age, and IQ score are not significant predictors of attachment security. In addition, the evidence of reflective function, safe haven/secure base, and adaptive response are higher in children reared in family homes compared to those raised in institutions. Overall, the results provide a profile of the attachment relationships in Saudi Arabian culture using the Friends and Family interview for different groups.

7 Chapter Seven: The Effects of Experiences of Alternative Care and Attachment Insecurity on Children's Psychosocial Development

7.1 Introduction

A key notion in attachment theory is that the quality or organisation of attachment is related to social and emotional wellbeing (Fearon et al., 2010; Rutter, 1995). Chapter 5 showed that institutional care in Saudi Arabia was associated with lower ratings in emotional, behavioural, and social development. Chapter 6 presented evidence that institutionalised children in Saudi Arabia exhibited a higher rate of insecure attachment in comparison to children living with their biological parents. The current chapter extends the results of Chapters 5 and 6 to explore the role of attachment in the development of emotional and behavioural symptoms, as well as social- and self-perception, in children in Saudi Arabia growing up in different care settings.

7.2 Abandonment Experience in Saudi Culture

Chapters 1 and 3 outlined that, in Saudi culture, infants born outside a family setting and/or given up soon after birth are typically placed into alternative care. The results of Chapter 5 showed that children living in institutions in Saudi Arabia reported more anxiety and loneliness, lower social competence and self-worthiness, and were reported by others to be less prosocial, as well showing more internalising and total difficulties. Beyond experiences related to the quality of care, processes related to identity development may also be associated with the social-emotional development of children growing up in alternative care. Firstly, perceived and experienced stigmatization associated with being abandoned and growing up in alternative care can impact development (UNICEF, 2003) and promote a feeling of being devalued, which in turn creates a risk of impaired identity (Kools, 1997). Secondly, associated legal practices can further compound identity development (Institute of Work, Health and Organisations, 2012). Accordingly, abandoned children might go through many complex psychological processes

across different aspects of their development, from confronting their own histories and identities (being abandoned), managing stigma (Dansey et al., 2019), to negotiating legal procedures in multiple areas throughout their life (Institute of Work, Health and Organisations, 2012). Such difficulties can lead to the emergence of psychosocial issues in later life.

Further, specific aspects of the nature and quality of care experienced in alternative care settings can impact children's social-emotional development. For example, carers in alternative settings require training to ensure that they can meet children's needs (Chapter 3; Interagency Working Group on Unaccompanied and Separated Children, 2013). Some children may require more attention and support, especially those with special needs, psychological problems, or maladjustment issues (Lee et al., 2018). Lack of adequate training in children's social-emotional development might result in carers lacking knowledge of how to support these needs. Children raised in institutions have been shown to struggle with the development of social skills due to their limited daily social interactions, even when the care environment offers resources and activities to address their developmental needs (Tibu et al., 2014). Such children are more likely to self-report lower social skills and self-worthiness (Weir, 2014).

7.3 Attachment Insecurity and Psychosocial Function

A number of studies have examined attachment insecurity as an indicator of psychosocial dysfunction at different developmental stages (Bohlin et al., 2011). In a meta-analysis, Fearon et al. (2010) provided evidence that some types of attachment insecurity were more likely to be an index of externalising problems. Fearon et al. meta-analysed data from 69 samples. They reported that the association between insecure attachment and externalising problems was significant with a medium effect size, but elevated risk was associated with disorganised attachment, while the other two insecure classifications were associated with weaker effect sizes. Groh et al.'s (2012) meta-analysis examined attachment insecurity and its association with internalising symptoms. Results from 42 samples confirmed that attachment insecurity was associated with a higher risk of internalising issues. Moreover, attachment resistance was specifically identified as a predictive factor for internalising problems, such as anxiety and social withdrawal. Groh et al. also found a significant effect of avoidance attachment on internalising behaviours

that predicted social withdrawal, while the association between attachment insecurity and externalising behaviours was small. In support, Brumariu and Kerns' review (2010) found that children with ambivalent/resistant and disorganised classifications reported symptoms associated with internalising problems and anxiety. When they examined studies that specifically included high-risk samples, they found that attachment avoidance had a significant association with internalising problems. These findings indicate that insecure attachments could be of particular importance to long-term mental health development.

It is argued that attachment relationships shape social relationships and skills (Bowlby, 1982). Existing literature provides substantial evidence that securely attached children perform better in their relationships with peers compared to insecure children, even when using different measures for attachment and peer relationships (Kerns & Brumariu, 2016). For example, Groh et al. (2014) performed a meta-analysis to explore the correlation between attachment and social skills with peers in childhood. Eighty samples were included, collectively comprising over 4,000 children. The results showed a significant association between attachment security and higher social ability (d = .39). All insecure classifications showed an association with lower social competence.

A considerable amount of literature has been published with regard to attachment in alternative care (see Chapter 2). Two considerations are particularly relevant for children reared in institutions. Firstly, studies of infants living in institutions demonstrate that, for many, the formation of an attachment seems incomplete or even absent (Dozier et al., 2012; García-Quiroga & Hamilton-Giachritsis, 2015). Secondly, where children in institutions have formed an attachment with caregivers, large proportions of them are classified as insecure, disorganised, or displaying attachments of atypical quality (Dozier et al., 2012; Lionetti et al., 2015; Zeanah et al., 2005). It is argued that such atypicality in the development of attachment in children growing up in institutional care is linked to their caregiving experiences, which are often characterised as discontinuous, insensitive, or unable to meet children's needs (Subhani et al., 2014).

Further research has found that insecure attachment predicts developmental difficulties among children living in alternative care (Carlson et al., 1989). These difficulties may be attributed to the fact that children

experience challenges when forming attachment relationships with new (and sometimes changing) caregivers, especially when they are older (McCall et al., 2018; Stovall & Dozier, 2000), or when caregivers are unavailable or insensitive (Rutter et al., 2007). These attachment styles are mainly the results of negative caregiver responsiveness, such as showing no, little, inconsistent, frightened, or frightening responses. Thus, the level of an attachment figure's availability plays a role in promoting emotional and behavioural outcomes in the child (Izard et al., 2006, as cited in DeKlyen & Greenberg, 2016).

The empirical evidence and theoretical hypotheses presented in this section, as well as the studies presented in Chapter 2, suggest that attachment insecurity increases the risk of experiencing psychosocial difficulties. Data in previous chapters showed that children growing up in institutional care in Saudi Arabia were more likely to show poor developmental outcomes (Chapter 5) and to be classified as insecure (Chapter 6). The aim of the current study is to examine the possible effect of interaction between child-rearing environment and attachment insecurity on children's psychosocial development in a Saudi context. It explored whether the effects of context (the child-rearing environment) on development vary by insecure and secure attachment classifications. Specifically, this study aims to examine:

- whether, in a sample from Saudi Arabia, attachment insecurity is associated with emotional, social, and behavioural challenges and a child's perception of self;
- the independent and combined effects of attachment insecurity and care experiences of different types on children's psychosocial wellbeing in Saudi Arabia.

7.4 Method

7.4.1 Participants

The participants described in Chapters 5 and 6 were included in this study. Thus, the final sample totalled 92 children from three groups, including typically-developing children (TD), cuddled children (CC), and children reared in institutions (CRI), as well as their primary carers and teachers. Table 7-1 presents IQ score data of the two factors.

Table 7-1

Descriptive data (mean M, standard deviation SD, range) of WISC test scores for attachment and groups

Attachment	Group	M	SD	Range
Secure attachment	TD	103.75	10.38	85-118
	CC	98.15	8.53	88-115
	CRI	98.29	8.97	85-109
Insecure attachment	TD	101.50	10.27	85-118
	CC	101.42	9.75	87-118
	CRI	92.88	9.88	76-109

7.4.2 Measures

The measures used in Chapters 5 and 6 were also utilised in this chapter, including the child self-reported anxiety scale (BAI-Y) from the Beck Youth Inventory, the child self-reported Loneliness and Social Dissatisfaction scale (LSDS), Social Competence and Global Self-Worth from the Self-Perception profile, the SDQ – parental version (internalising and externalising behaviour subscales and total difficulties), the SDQ – teacher version (internalising and externalising behaviour subscales, and total difficulties), and the attachment four-way classifications (secure, dismissive, preoccupied, and disorganised) from the Friends and Family Interviews. For the purposes of analysis in this chapter, the four-way classification measure was recoded into a binary variable distinguishing the secure classification (scored 0) from all insecure classifications (scored 1). This recoding was done because there were no children categorised as disorganised in the CC group.

7.4.3 Approach to analysis

Multiple two-way ANOVAs were conducted to examine the effects of the group factor with three levels (TD, CC, CRI) and the attachment factor with two levels (insecure versus secure), as well as their interaction, on the outcome variables. For dependent variables that showed significant correlation with children's IQ either across the sample or within groups (social competence, global self-worth, parent-reported SDQ internalising behaviour and total difficulties), multiple regression analyses were conducted first, including three predictors (group, attachment, and IQ) to determine whether there was an effect of group and attachment on outcome, independent of IQ. As discussed in Chapter 5, entering a variable as a covariate which varied significantly according to the levels of the independent variable will not balance out the results (Field, 2016; Miller & Chapman, 200). Thus, the

regression analysis was chosen to examine whether there is an IQ effect on the outcomes.

As the group variable includes three levels, for regression analyses, two separate dummy variables were created with the TD group as the reference group in both (scored as 0) (Field, 2018). Thus, the recoding resulted in two variables: one variable compared the cuddled group (CC, coded 1) against the TD group, and the other variable compared the institutionalised group (CRI, coded as 1) against the TD group. Therefore, the regression model included four predictors (CC, CRI, attachment insecurity, and IQ).

7.5 Results

Preliminary analysis

For the two-way ANOVA analyses, a residual analysis was performed to test the assumptions. All outcome variables were checked for outliers and normality (according to Shapiro-Wilk's test (Shapiro & Wilk, 1965)), and skewness and kurtosis Z-scores of ± 2 were considered problematic (George & Mallery, 2010; Field, 2018). The homogeneity of variance was assessed using Levene's test (Levene, 1960). For the SDQ parent version, the externalising behaviour subscale showed few outlier points and was not normally distributed. The scale was square rooted and checked with and without the outliers. The results were not affected by the outlier points. However, the secure cuddled group had skewness and kurtosis z-scores of + 2. The outliers were therefore removed to meet the normality assumption for all groups. For the SDQ teacher report, data from the internalising behaviour subscale and total difficulties violated the assumptions of normality and homogeneity. A square root transformation was made to meet both assumptions (see Appendix B.3). For externalising behaviour, the data showed a level of heterogeneity, and so the data was log transformed to meet the assumption of homogeneity.

Harrell (2001) suggested 10 subjects per variable as the minimum sample size for running the linear regression models. There was linearity, as assessed by a plot of studentized residuals against the predicted values. There was an independence of residuals, as Durbin-Watson statistics determined, with a score close to 2 (1.77 - 1.94). The assumption of homoscedasticity was met by using Breusch-Pagan statistic test (Astivia &

Zumbo, 2019; Gignac, 2019). There was no evidence of multicollinearity, as the Variance Inflation Factor (VIF) was not greater than 10, and the tolerance was not below .2. There were also no studentized deleted residuals greater than ±3 standard deviations, no leverage values greater than .2, and no values for Cook's distance above 1. The assumption of normality was met, as the Q-Q Plot determined (see Appendix B.4). Table 7-2 presents descriptive data for both factors and all outcome variables included.

Factors effects

Table 7-3 shows that, in terms of the self-reported scales, the group by attachment security interaction was not significant for any of these dependent measures. In addition, there was no significant interaction between the group and attachment factors. For anxiety, there was no main effect of the group, but there was a main effect of attachment insecurity, $F(1, 86) = 7.83$, $p = .01$, partial $\eta^2 = .08$, highlighting that children in the secure attachment group reported fewer symptoms of anxiety (M = 44.33, SD = 8.07, range = 33-68) compared to those in the insecure attachment group (M = 50.63, SD = 8.08, range = 33-67). For self-reported loneliness and dissatisfaction, there was a main effect of group, $F(2, 86) = 3.92$, $p = .02$, partial $\eta^2 = .08$, showing that CRI reported significantly higher feelings of loneliness (M = 40.22, SD = 9.14, range = 26-61) compared to the TD group (M = 32.56, SD = 9.61, range = 16-53) and the CC group (M = 33.57, SD = 8.46, range = 16-50). There was no significant difference between the TD and CC groups. In addition, attachment showed significant main effect, $F(1, 86) = 4.06$, $p = .04$, partial $\eta^2 = .05$, as children in the secure attachment group reported lower feelings of loneliness and dissatisfaction (M = 32.10, SD = 9.54, range = 16-51) compared to those in the insecure attachment group (M = 38.10, SD = 9.16, range = 21-61).

For parent-reported externalising behaviour, the main effect of attachment insecurity was significant, $F(1, 85) = 10.67$, $p = .04$, partial $\eta^2 = .11$, but there was no main effect of group, nor a significant group by attachment interaction effect. Parents or caregivers of children classified as secure reported fewer externalising behaviour problems (M = 2.02, SD = 2.00, range = 0.00-3.74) compared to those in the insecure attachment group (M = 2.68, SD = .86, range = 1-4.90).

None of the effects for teacher-reported measures (i.e. SDQ internalising, externalising, total difficulties) were significant.

Table 7-2

Descriptive data (number of children N, mean M, and standard deviation SD) for attachment (attachment insecurity and security) and groups (typically developed children TD, cuddled children CC, and children reared in institutions CRI) for outcomes (i.e., dependent variables)

	Attachment insecurity						Attachment security					
	TD		CC		CRI		TD		CC		CRI	
Dependent variables	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)
Child self-reported symptoms												
Anxiety (BAI-Y)	16	50.31 (9.06)	12	48.92 (9.15)	24	51.71 (6.96)	20	43.20 (7.16)	13	43.69 (7.37)	7	48.71 (11.16)
Loneliness/social dissatisfaction (LSDS)	16	35.19 (9.33)	12	36.25 (6.10)	24	40.96 (9.76)	20	30.45 (9.53)	13	31.38 (9.81)	7	38.14 (7.62)
Social Competence	16	18.71 (1.49)	12	18.00 (3.33)	24	14.08 (3.09)	20	19.65 (2.92)	13	19.54 (3.28)	7	16.83 (1.94)
Global self-worth	16	19.56 (2.55)	12	16.42 (3.50)	24	15.83 (3.83)	20	20.45 (3.15)	13	18.77 (5.21)	7	14.71 (3.20)
SDQ parent-reported symptoms												
Internalising	15	7.47 (2.97)	12	4.83 (3.46)	24	6.83 (3.35)	20	5.50 (3.26)	13	5.00 (2.61)	7	5.71 (1.70)
Externalising	15	2.40 (.79)	12	2.87 (.87)	24	2.77 (.89)	18	2.10 (.61)	11	1.89 (.40)	7	2.16 (.74)
Total difficulties	15	13.93 (5.95)	12	11.50 (4.08)	24	15.25 (7.42)	20	10.45 (5.84)	13	9.62 (4.82)	7	10.86 (4.10)
SDQ teacher-reported symptoms												
Internalising	12	2.71 (.86)	8	2.18 (.50)	23	2.37 (.90)	17	2.27 (.43)	9	1.90 (.55)	7	2.18 (.64)
Externalising	10	.81 (.33)	8	.74 (.18)	18	.89 (.27)	15	.72 (.33)	8	.59 (.21)	6	.71 (.22)
Total difficulties	12	3.70 (1.02)	8	3.23 (.67)	23	3.48 (1.29)	17	3.25 (.83)	9	2.68 (.79)	7	3.05 (.90)

Table note. BAI-Y = Beck anxiety inventory; LSDS = loneliness and social dissatisfaction scale; SDQ = strengths and difficulties questionnaire Table 7-3

Two-way ANOVAs summary for two factors, group and attachment (2-way), with dependent variables

Dependent Variables	Source	*df*	MS	*F*	*p*	Effect Size
BAI-Y	Group	2	107.31	1.63	.20	.04
	Attachment	1	513.98	7.83	.01	.08
	Group*Attachment	2	28.78	.43	.65	.01
	Error	86	65.61			
LSDS	Group	2	326.05	3.92	.02	.08
	Attachment	1	337.24	4.06	.04	.05
	Group*Attachment	2	7.81	.09	.91	.00
	Error	86	83.02			
SDQ-P Externalising behaviour	Group	2	10.68	.60	.55	.01
	Attachment	1	189.17	10.67	.01	.11
	Group*Attachment	2	20.18	1.13	.32	.03
	Error	85	17.72			
SDQ-T internalising behaviour	Group	2	1.09	2.16	.12	.06
	Attachment	1	1.47	2.91	.09	.04
	Group*Attachment	2	.10	.20	.81	.01
	Error	70	.50			
SDQ-T Externalising behaviour	Group	1	.29	3.68	.06	.06
	Attachment	2	.08	1.06	.35	.04
	Group*Attachment	2	.01	.16	.85	.01
	Error	59	.07			
SDQ-T total difficulties	Group	2	1.41	1.36	.26	.04
	Attachment	1	3.64	3.51	.06	.05
	Group*Attachment	2	.01	.01	.98	.00
	Error	70	1.03			

NB: MS = Mean Square; effect size = partial eta squared (η^2_p). BAI-Y = Beck anxiety inventory; LSDS = Loneliness and social dissatisfaction scale; SDQ-P = the strength and difficulties questionnaire of caregiver report; SDQ-T = the strength and difficulties questionnaire of teacher report

Next, a series of regression analyses were conducted to examine whether the effects of group and attachment were independent of children's IQ. For all regression models, all predictor variables (CC, CRI, attachment, and IQ) were entered simultaneously.

Multiple regression models were significant for self-reported social competence and global self-worth, and for parent-reported SDQ total difficulties. Importantly, IQ was not a significant predictor in any of the regression models.

Table 7-4

Multiple regression analysis for social competence and global self-worth from self-profile perception variables and parents version of the SDQ (internalising behaviour and total difficulties)

			95 CI for B				
Model		*B*	*LL*	*UL*	*SE B*	β	R^2
Self-reported scales							
Social	(Constant)	17.06	10.07	24.04	3.51		.36***
competence	CC	.09	-1.49	1.68	.79	.01	
	CRI	-3.57	-5.21	-1.93	.82	-.45***	
	Attachment	-1.70	-3.04	-.36	.67	-.22 **	
	IQ	.02	-.04	.09	.03	.068	
Global self-worth	(Constant)	14.330	5.98	22.67	4.20		.25***
	CC	-2.225	-4.12	-.32	.95	-.24*	
	CRI	-3.721	-5.68	-1.75	.98	-.43***	
	Attachment	-.741	-2.34	.85	.80	-.09	
	IQ	.059	-.02	.14	.04	.14	
SDQ Parents-reported scales							
Internalising	(Constant)	8.79	1.52	16.05	3.65		.08
behaviour	CC	-1.57	-3.20	.061	.82	-.22	
	CRI	-.38	-2.09	1.32	.86	-.05	
	Attachment	1.06	-.30	2.43	.69	.16	
	IQ	-.02	-.09	.04	.03	-.09	
Total	(Constant)	14.46	.68	28.25	6.93		.12*
difficulties	CC	-1.71	-4.81	1.38	1.56	-.12	
	CRI	.86	-2.39	4.10	1.63	.06	
	Attachment	3.21	.61	5.81	1.31	.26 **	
	IQ	-.03	-.17	.09	.06	-.03	

Note. Model = 'Enter' method in SPSS Statistics; *B* = unstandardised regression coefficient; CI = confidence interval; LL = lower limit; UL = upper limit; *SE B* = standard error of the coefficient; β = standardised coefficient; *p < .05; **p < .01; *** p < .001; CC = cuddled group; CRI = children reared in institutions

For self-reported social competence, the group differences between CRI and TD children and attachment insecurity were significant predictors. For global self-worth, both the group difference between CRI and TD, and between CC and TD, were significant predictors. Attachment insecurity was not a significant predictor of global self-worth. For parent-reported total difficulties, attachment insecurity was a significant predictor (see Table 7.4). The effect sizes varied from small to medium, according to Cohen (1988).

As there were no significant effects of IQ in the regression models, further ANOVAs were conducted on these outcome measures to examine the interaction effect between group (3 levels) and attachment (2 levels). To test for the interaction, ANOVAs were preferred over regression models (where interaction terms are entered as predictors), as ANOVA permits the inclusion of the 3-way group variable (i.e. care type) instead of entering two interaction terms in the regression models, one for each dummy variable. There was no statistically significant interaction between groups and attachment for social competence score, $F(2, 86) = .018$, $p = .98$, partial $\eta^2 = .02$; global self-worth, $F(2, 86) = 1.31$, $p = .27$, partial $\eta^2 = .03$; internalising behaviour (carers' report), $F(2, 85) = .85$, $p = .43$, partial $\eta^2 = .02$; and total difficulties (carers' report), $F(2, 85) = .27$, $p = .76$, partial $\eta^2 = .01$.

Attachment classifications

The above results of the ANOVA and multiple regression analyses showed a significant effect of the two-way classification of attachment on the following dependent variables: BAI-Y, LSDS, social competence, SDQ-P externalising behaviour, and SDQ-P total difficulties. In order to explore the effects for the different attachment classifications (secure, dismissive, preoccupied, and disorganised classifications) (see DeKlyen & Greenberg, 2016), one-way ANOVAs were conducted with the four-way attachment classification variable. The Gabriel and Hochberg post hoc tests revealed that the secure children were statistically more likely to show lower symptoms of anxiety compared to preoccupied and disorganised children; lower feeling of loneliness compared to disorganised children; better social competence perception compared to preoccupied and disorganised children; lower scores in externalising behavioural problems and lower total difficulties compared to dismissive children. The results revealed no significant difference between insecure classifications (see Table 7-5).

Table 7-5

Descriptive data (mean and standard deviation) and one-way ANOVA for four attachment classifications and dependent variables

Dependent variables	Secure	Dismissive	Preoccupied	Disorganised	*F*	MS	*P*	η^2
	M (SD)	M (SD)	M (SD)	M (SD)				
BAI-Y	44.33	49.50	51.05	53.71	5.10	334.42	.003	.15
	(8.07)	(8.69)	(7.38)*	(7.74)*				
LSDS	32.10	37.19	36.89	44.71	4.58	389.37	.005	.14
	(9.54)	(8.29)	(10.32)	(6.87)*				
SC	18.95	17.58	14.89	14.14	8.77	96.75	.000	.23
	(3.32)	(3.03)	(3.69)*	(3.23)*				
SDQP-EB	2.05	2.81	2.52	2.58	5.43	3.14	.002	.16
	(.57)	(.83)*	(.95)	(.78)				
SDQP-TD	10.25	15.23	11.74	15.67	4.58	155.10	.005	.14
	(5.15)	(6.88)*	(5.20)	(6.83)				

BAI-Y = Beck anxiety inventory; LSDS = Loneliness and social dissatisfaction scale; SC = social competence; SDQP-EB = the externalising behaviour subscale of strengths and difficulties questionnaire of caregiver report; SDQP-TD = the total difficulties of strengths and difficulties questionnaire of caregiver report; η^2 = Eta-squared for effect size.* showed significant difference with secure attachment classification.

7.6 Discussion

The present study was designed to examine the effects of the group-rearing environment and attachment insecurity on a range of measures of psycho-social and behavioural function in children in Saudi Arabia. To the author's knowledge, there is currently no published data on children's psychosocial functioning in Saudi Arabia as a function of different care experiences (including cuddled and institutional care settings) and attachment insecurity. Utilising data from Chapters 5 and 6, this study examined the impact of secure versus insecure attachments in three different child-rearing settings (biological family, cuddling, institutional care) on child-reported anxiety, loneliness and social dissatisfaction, social competence and global self-worth, and SDQ parent- and teacher-reported scales. Differences between attachment classifications (secure, dismissive, preoccupied, and disorganised) on outcome variables were also explored.

The results showed that the main effects for both group and attachment insecurity, but not their interaction, were associated with several developmental outcomes. With respect to the main effects for care settings, children in institutions showed increased feelings of loneliness and lower

scores for both social competence and self-worthiness, similar to the results reported in Chapter 5. For the main effects of attachment, children classified as secure reported fewer symptoms of anxiety, fewer feelings of loneliness, and higher social competence, compared to their insecure peers. In addition, parents reported more externalising problems and total difficulties for children with insecure attachment relationships. Further analysis on the different attachment classifications highlighted that the disorganised classification (versus secure attachment) was associated with a higher prevalence of self-reported variables, specifically, increased anxiety, loneliness, and lower social competence. The dismissive classification (versus secure attachment) was associated with elevated parent-reported externalising behaviours and total difficulty scores on the SDQ. The preoccupied classification was associated with higher anxiety symptoms and lower social competence.

Group outcomes

Differences in care setting were significant for children's own perceptions of their social functioning and self-worth (loneliness and self-perception profile scales), with institutionalised children reporting poorer social functioning and self-perception compared to children living with their biological parents. The finding was similar to Al-Bar and Abu Farraj (2011) and Al-Suwaihri's (2010) studies, which found increased feelings of loneliness and a lack of social integration as well as a lower perception of identity among institutionalised children in Saudi Arabia. The feeling of loneliness in this group may reflect lower social ability. As mentioned in Chapter 5, institutionalised children might feel less socially competent than their peers in different contexts, which in turn decreases their sense of self-esteem (Reeves & Kennedy, 2017).

The findings in Chapter 5 demonstrate substantial differences between groups, with institutionalised children displaying increased anxiety and loneliness, lower self-perception and a higher rate of behavioural problems. The current chapter considered the effects of group, independently of and in combination (interaction) with, attachment. When both attachment security/insecurity and group status were included in the analyses, the group effects reported in Chapter 5 (anxiety, internalising problems and total difficulties) disappeared.

In contrast to previous research which reported that institutionalised children who were insecurely attached show increased psychological, social and behavioural problems (Barcons et al., 2012; Fernyhough, 2003; McSherry et al., 2016; Wreakate & Tannous, 2017), the results of the present study showed that there were no significant group and attachment interaction effects for any of the outcome measures. It is possible that the present study lacked enough power to detect statistically significant effects due to the fairly small study sample. However, when looking at the effect sizes of the interactions, these are small and only explain very small amounts of variance in the dependent variables. It is also possible that the characteristics of insecure children affected the results especially those involving self-reported scales. Children with dismissing attachment classification tend to be characterised as self-portraying themselves as strong, with minimal articulation of being hurt, distressed, or needing others. Thus, they may have underreported any internalizing or externalizing symptoms and presented themselves as competent as secure children in social and self-adaptation.

Attachment outcomes

The results of this study parallel those from previous studies that investigated the impact of insecure attachment on anxiety (Sroufe, 2005). Moreover, the preoccupied and disorganised attachment classifications were linked to anxiety, consistent with the early findings which suggested that both are risk factors for the development of internalising problems (Colonnesi et al., 2011; Kerns & Brumariu, 2014). The findings for insecure attachment and anxiety were also consistent with the theoretical assumption that preoccupied and disorganised children are more likely to be characterised by higher frustration and imbalance between proximity and distance. These characteristics are thought to arise from the attachment figure's inconsistent patterns of behaviour in response to their distress (Brumariu et al., 2012; Kerns & Brumariu, 2016), which increase the child's likelihood of developing emotional problems (DeKlyen & Greenberg, 2016).

Specifically, children who were classified as preoccupied are thought to have encountered uncertain caregiver availabilities and/or inconsistent caregiving styles that promote dependence over autonomy (Cassidy & Berlin, 1994). It is argued that uncertain caregiver availability compromises the child's development of confidence in the attachment figure's availability. This

lack of confidence in carer's response in turn can provoke internalising behaviours, particularly anxiety (Renken et al., 1989).

The risk of having emotional symptoms is also greater for children with disorganised attachment, because this attachment style is a result of living with a frightening or frightened caregiver, whose caregiving does not encourage the development of a coherent strategy to cope with distress (Brumariu & Kerns, 2010); this can potentially contribute to mental health problems (Goldberg et al., 1995). The risk of psychopathology in disorganised children has been widely documented in low and high risk populations in middle childhood (Borelli et al., 2010; Bureau et al., 2009). Altogether, insecure children were, therefore, more likely to learn ineffective techniques for managing emotional arousal (Thompson, 2001).

The results of this study showed an association between increased feelings of loneliness and disorganised attachment, which is consistent with the findings of other studies (e.g., Erozkan, 2011; Groh et al., 2014; Pakdaman et al., 2016) in which disorganised attachment was positively related to loneliness. However, the results of the current study contradicted other findings of Erozkan and Groh et al., who found a significant association between increased loneliness and the other insecure classifications. Although the other insecure classifications were not significantly different in the current study, both types showed higher means than the securely attached children. This may give an indication of a positive relation between insecure attachment and feelings of loneliness. Overall, attachment insecurity shows that insecure people undergo some limitations in their social life which hinder positive interactions with others, and this may be an explanatory factor for loneliness (Akdoğan, 2017).

The regression analysis revealed that attachment insecurity was a significant predictor of a child's lower self-perception of social competence. Both disorganised and preoccupied children perceived themselves as socially less competent than their peers. These results are similar to those of other studies (e.g., Groh et al., 2014) and confirm the association between attachment insecurity and lower social competence. The poorer social competence of insecure children was not a surprise, as previous research has shown that insecure children are more likely to have trouble getting along with others, especially their peers (Deniz et al., 2005; Zimmermann & Becker-Stoll, 2002).

Furthermore, the current findings support the idea that attachment security is positively associated with the development of social adaptation (Groh et al., 2014). Somewhat surprising was the finding of comparable rates for secure and dismissive children in terms of their self-reporting on social competence. However, it is plausible that dismissive children may tend to idealise themselves, presenting as socially competent or satisfied with the limited relationships they have, while in reality feeling uncomfortable (Rose et al., 2014). The overall observed correlation between attachment and social adaptation measures (loneliness and social competence) offers evidence that securely attached children are socially competent and show a greater interest in engaging with their peers, having been able to learn more advanced social skills from caregivers' responses (Kerns & Brumariu, 2016; Sroufe, 2005).

Externalising and total difficulties were associated with the dismissive attachment classification. This finding seems to be in line with the theoretical assumption that dismissive children express their insecurity by exhibiting certain behaviours (e.g., being antisocial or aggressive) to show they are strong and do not need anyone, particularly primary caregivers (DeKlyen and Greenberg 2016; Renken et al., 1989). Although the empirical work showed mixed evidence, as dismissive children are likely to exhibit internalising behaviours (Lyons-Ruth et al., 1997), the findings are partly consistent with those of earlier studies (Fearon & Belsky, 2011; Fearon et al., 2010; Groh et al., 2012) that showed an association between dismissive attachment classifications and externalising problems. However, the present study has been unable to confirm the association between attachment disorganisation and externalising behaviour as well as total difficulties. This is likely associated with the very low number of children classified as disorganised in the present study. Still, the results of the disorganised group suggested higher means for externalising behavioural and total difficulties compared to secure children, which can be an indication of the existence of the insecurity effect.

Attachment had an insignificant effect in all of the teachers' reports. Despite this, attachment insecurity explained a higher level of total difficulties and internalising behaviour. The findings of the current study contrast with those of previous research that found attachment insecurity to be a significant predictor of a higher level of internalising and externalising problems (Moss et al., 1996). For example, Moss et al. (2006) examined the relationship

between attachment and behaviour problems (internalising and externalising) in children in middle childhood from different socioeconomic backgrounds, based on information from different respondents, including teachers. In the Moss study, teachers' results showed insecure children having more internalising and externalising problems than secure children. It is important to note, however, that these contrasting results could be due to the level of differences in the measures which, accordingly, determine the association between attachment relationships and behavioural development (Kerns & Brumariu, 2014).

Collectively, the present results confirm the importance of attachment relationships for children who live with either biological or non-biological caregivers. This research extends our knowledge of the magnitude of attachment, and it could act as a protective factor for Saudi children. The findings add to the body of literature (e.g., Al Obeidi & Al Saadi, 2015; O'Connor et al., 2003; Smyke et al., 2010) that state, regardless of the context in which the child lives, the carer-child tie should be considered as a crucial factor for subsequent development. Therefore, attachment relationships are important in facilitating psychosocial development and are valuable in understanding the outcomes for Saudi children. This research will serve as a base for future studies, as it extends beyond children in alternative care to include those who live with their biological parents. Hence, it could be hypothesised that caregivers living with children in different settings, including family homes, need to cultivate parental skills that reflect a combined, balanced, sensitive, and responsive caregiving style. As shown in other studies (Dozier et al., 2012; McCall et al., 2018; Toth et al., 2009), these skills carry constructive action, help to develop attachment security, and thus can result in better psychosocial outcomes for children.

The present study has a number of important limitations. Firstly, the sample was too small for robust assessment of differential effects associated with the different insecure classifications; specifically, only a few children were classified as disorganised across all groups. Secondly, the findings of the present study arise from a cross-sectional design. As such, the current findings do not permit inferences about the direction of effects. Thirdly, the study did not look at some important factors, such as comparing the effects of family-based and ward-based institutions, as few children were from the latter type. This is important since it could shed light on the importance of

care design (see Chapter 3). Further research regarding the role of attachment relationships and developmental outcomes in alternative care would be worthwhile in terms of examining some important aspects, such as attachment organisation versus disorganisation. Additionally, the recently-launched foster care programme (social houses, see Chapter 3) and the new cuddling system that allows private agencies to manage cuddling processes in Saudi Arabia (see Chapter 1) emphasise the need to examine more closely the links between carer-child ties and developmental outcomes.

7.7 Conclusion

The present study is designed to look at the interaction between child-rearing environments and attachment insecurity, and to determine their effects on developmental outcomes. The results expand on existing research to consider attachment relationships and development in a Saudi context. They showed the most influential factors in poor developmental outcomes to be group rearing and attachment insecurity, but not their interactions. The study points out the importance of carer-child relationships in all types of care settings, including biological family homes. As a result, the value of adapting interventions with the intention of developing carers' capabilities is that it increases the possibility of significant improvements in the children's psychosocial wellbeing.

8 Chapter Eight: General Discussion

The primary aim of this thesis was to investigate the role of care type and attachment relationship on psychosocial development during middle childhood in Saudi Arabia. Additionally, it sought to determine the specific risks associated with care type and/or attachment relationship. To capture the nature of institutional care, the thesis included a brief description of the institutional care environment for abandoned children based on a survey of institutional staff in Saudi Arabia. The thesis focused on attachment theory as a framework, and explored models utilised in existing literature (Garcia Quiroga & Hamilton-Giachritsis, 2015; Groark et al., 2011; van IJzendoorn et al., 2011) to look at how care settings and the caregiver-child relationship affect development. This chapter brings together and discusses the key findings presented in Chapters 3 through 7.

Chapter 3 described institutional care, and Chapter 4 provided data on translation of the two key scales (Loneliness and Social Dissatisfaction: Asher et al., 1984; Social Competence and Global Self-Worth subscales of Self-Perception Profile for children: Harter, 1985, 2012), which were translated and adapted for the Saudi context. Next, Chapter 5 examined psychosocial and cognitive development in children who had been raised in an institution, compared to cuddled children, and to those who live with biological parents. Chapter 6 then explored the construct of attachment in Saudi Arabia, and Chapter 7 examined the effect of care settings and attachment on several developmental outcomes (i.e., emotional and behavioural problems, loneliness, social competence, and self-esteem). The main findings are compared to the theoretical framework and previous research, and are linked to a broader discussion related to the challenges encountered by alternative care residents in Saudi Arabia. The chapter further discusses the limitations and strengths of the present research, and provides suggestions for future research to develop protocols for intervention and prevention.

8.1 Institutional Care for Abandoned Children: The Saudi Arabian Situation

The primary aim of this thesis was to explore the effects of the type of care and attachment relationship between different groups of children in Saudi Arabia. A review of existing research uncovered a lack of information in

relation to institutional care for abandoned children in Saudi Arabia. On the one hand, most of what has been studied has been linked to child functioning (e.g., mental health, social function, or self-esteem). On the other hand, the nature of institutional care in Saudi Arabia is unclear in terms of how it is organised, the programmes and services provided, and the responsibilities and training opportunities for employees and caregivers. Therefore, this study aimed to draw attention to institutional care in Saudi Arabia, to provide a clear understanding of what institutionalised children experience.

Chapter 3 showed that institutions in Saudi Arabia generally provide a home- or ward-based environment for children, where the number of children in each home and/or ward varied from between 1-5 to 6-10. In Saudi institutions, there was no homogeneity between children according to age or health conditions. This institutional context is atypical of the reported global standard (see Groark et al., 2011; Muhamedrahimov et al., 2016; van IJzendoorn et al., 2011), in which children of specific ages or with health conditions are usually placed together. In line with other research (Groark et al., 2011), age was the most relevant criterion in transferring children from one institution to another. Additionally, while institutional care is characterised by large group sizes (Julian et al., 2019; Mazzarino, 2014), few Saudi institutions host more than 30 children, and the majority have fewer. The low number of children in institutional care could be attributed to the fact that the government is now prioritising the family care solution (via cuddling and foster care), a care design that supports the family structure, transfers children to foster care, and eases cuddling (adoption) procedures.

Staff numbers and working hours could be both an advantage and disadvantage for the Saudi institutions, which promote job stability, with most carers working 7-8 hours at a time. This approach results in around three caregivers for every five children each day in HBIs and 4-6 caregivers in most WBIs, which is similar to data from some Chinese institutions (4:5) (Julian et al., 2019). Moreover, the results showed a carer-child ratio of 1:5 during work hours in most institutions, which demonstrates some variation with reviews and empirical literature that found this ratio to be 1:7-31 (Bakermans-Kranenburg et al., 2011; Rutter et al., 2007; Zeanah et al., 2005), and the current results may prove to be an indication of a low caregiver-child ratio in Saudi institutions compared to the global findings. This raises an important

question in regard to the idea of multiple caregivers in Saudi institutions: who is playing the primary caregiver role?

Some preventive and intervention programmes are in place to improve children's daily life and social-emotional development in home- and ward-based institutions. Programmes typically focus on psychological services, access to training, and managing school difficulties. Although the institutions showed some variation in application based on care design, there were minimum levels of psychosocial deprivation in Saudi institutions, as they provide more than just the basic needs of food, cleanliness, and physical healthcare, all of which is reported in other studies (Langton, 2006; The St. Petersburg-USA Orphanage Research Team, 2008).

The results showed some variation in caregiver behaviour. Descriptions of carer-child interactions were characterised as warm and involved, including talking with and listening to children. Conversely, some aspects of the institutional survey showed these interactions to be less sensitive and responsive. This inconsistency may be due to there being multiple caregivers for each home/ward, as stated earlier. Some authors have speculated that variations in caregiving could be related to the level of a caregiver's education and training, with a number of studies reporting that institutions require only a modest level of education (Rosas & McCall, 2009, as cited in Groark et al., 2011). Consistently, the demographic forms in Chapter 5 found that most carers only had a high school level of education. Furthermore, institutional staff were not given training opportunities, which may also contribute to less positive outcomes for caregiver behaviour.

8.2 Translation and Adaptation Process of Scales

Two scales, originally developed and administered in the English language (the Loneliness and Social Dissatisfaction Scale, Asher et al., 1984; and the Self-Profile Perception Scale, Harter, 1985, 2012), were translated and adapted for use with Arabic speakers, using the World Health Organization's (WHO, 2010) five-practical-step translation and adaptation of instruments processes. The findings of the translation process revealed that both scales were psychometrically suitable for use with the intended population in terms of reliability and validity (i.e., content, criterion, and construct validity). This method was therefore found to be conducive to psychometric testing of the translated and adapted scales amongst Saudi children.

8.3 Psychosocial and Cognitive Function in Children Who Grow Up in Institutional Care or Are "Cuddled" in Saudi Arabia

Chapter 5 presented the results of child psychosocial function and cognitive ability in alternative care. It included symptoms of poor mental health, behavioural problems, social adaptation, self-perception, and IQ scores. The data was collected from self-reported scales, as well as from primary carers and teachers. The results showed that institutionalised children self-reported increased symptoms of anxiety and depression, feelings of loneliness, lower social competence and self-worthiness, and lower cognitive functioning compared with both other groups. These results were consistent with other studies (e.g., Bos et al., 2011; Elebiary et al., 2010; Maclean, 2003) that found a higher rate of developmental challenges in institutionalised children. The CC group showed no significant difference to children raised in their biological parents' homes, except with respect to self-reported global self-worth.

The SDQ data showed that cuddled children were reported by carers as showing increased prosocial behaviour, fewer internalising symptoms, and lower total difficulties compared to both groups. In accordance with the present results, previous studies using the same method (e.g., Abdel Hakeem et al., 2018) have demonstrated that institutionalised children reported more behavioural problems. However, this pattern of findings was not found in teacher reports, for which no differences were evident between groups. This could be explained by the level of relationship between primary carers and children, compared to that of the relationship between teachers and children. This could also confirm that informant discrepancies reflect cross-contextual variations in the behaviour of children, as well as informants' personal viewpoints on such behaviour (De Los Reyes et al., 2009). Accordingly, the results of primary carers and teachers may suggest two main things: first, that primary carers may be more or less sensitive to the child's psychosocial development compared to teachers; and second, that it is important to pay more attention to self-reported assessment, as not all children are necessarily functionally impaired at home or in school (Moss et al., 2006).

This study extended previously reported findings (Al-Kathiry, 2014; Al-Suwaihri, 2010) for children living in institutional care in Saudi Arabia who

have experienced abandonment at an early age. Although abandoned children institutionalised in Saudi Arabia had not had adverse early experiences, the current and earlier findings suggest an increased rate of mental health and behavioural problems, as well as social and self-dysfunction, plus lower cognitive ability. The context of institutional care itself, regardless of specific early cultural and societal experiences, is characterised by segregation or isolation from the child's community or cultural origin (Garcia Quiroga & Hamilton-Giachritsis, 2015; Zeanah et al., 2011). This interpretation is backed by data from the findings of the CC group in the current study. These children had encountered early abandonment, but were raised in adopted homes, and their results were equivalent to those of the control group. Further factors may explain the institutional results, such as the interplay between the individual (genetic factors) and their environment (unstable environment) (Rutter et al., 2006).

The findings of the cuddled group, which showed similar patterns to the group of children growing up with their biological parents, did however contrast other research from other countries of children's functioning in middle childhood, in particular for children who had early institutional experiences. Previous studies have found that adopted children reported increased internalising, externalising, social, and emotional problems compared with those living at home with their birth parents (Hawk & McCall, 2010; Knuiman et al., 2014). In addition, this earlier research concluded that adoptees are at greater risk of developmental challenges (Wiik et al., 2010). The increase in developmental problems observed in previous studies could be attributed to the fact that most of the children studied had experienced some time in institutions, and some entered institutional care due to early maltreatment (Knuiman et al., 2014). In contrast, the CC group in the present study all joined their cuddling family in the first months of their life.

Time spent in institutional care and early maltreatment, even when the child was placed in better care at a later date, may explain the variation between previous and current results (McCrory and Viding, 2015). Age at adoption may be an important predictor for developmental adjustment or maladjustment, where previous research has found that the longer a child stays in institutions, the more likely they are to exhibit developmental problems (see Gunnar & Van Dulmen, 2007; Merz & McCall, 2010). The current results are in line with the finding that those who were adopted early

perform well in different developmental domains (Julian & McCall, 2015), and could be explained by the possible effect of a sensitive period (e.g., Kreppner et al., 2007) as "the earlier the better" (Zeanah et al., 2011, p.147), with more developmental adjustment for those who were subjected to shorter institutional experience.

8.4 Attachment in Saudi Arabia: A Description of the Carer-Child Relationship in Middle Childhood

Attachment security is an important part of development that considers the balance between a child's autonomy and their relationships with significant others (Steele et al., 2015). As a result, this study aimed to investigate the attachment relationships in Saudi Arabia in three groups. However, it was not well-known whether attachment theory, which is based on Western literature, would apply in a non-Western culture. Therefore, this study utilised the Friends and Family Interview (FFI) to measure the nature of the carer-child relationship in Saudi Arabia in middle-childhood (see also Stievenart et al., 2012). The FFI generates scores for different scales as indices of attachment classification. Middle childhood was identified by specific features, such as the phase when the attachment system goal shifts from proximity to availability. This is apparent in a lessening of dependency on the primary carer, which is a response to the development of self-regulation. In this stage, however, the primary caregiver remains the attachment figure, and therefore, caregivers continue to act as the child's safe haven and secure base (Bosmans & Kerns, 2015).

The results showed that 56% of children who lived with their biological parents showed secure attachment (versus insecure classifications). Children living with non-biological parents showed 52% secure attachment. In addition, 77% of children reared in institutional care exhibited insecure attachment classifications, in particular, dismissive and preoccupied attachment. A small number of children (around 8%) showed a disorganised attachment classification across the sample. Despite the mixed results (Bosmans & De Smedt, 2015; Smyke et al., 2010; van IJzendoorn et al., 1995), the demographic variables (gender, age, IQ) were not associated with attachment security within groups. For the scales related to attachment, the majority of those living with biological parents and cuddling parents showed moderate to marked evidence of reflective function constructs, as well as safe haven and

secure base. In contrast, institutionalised children mostly showed mild evidence, with few children showing moderate to marked evidence of reflective function, safe haven, and secure base.

Previous research has looked at the attachment relationships in middle childhood and found a variation across the contexts in which children are raised (e.g., Bakermans-Kranenburg et al., 2011; Kamza, 2019; Pace et al., 2015). Consistent with theoretical and empirical evidence, the results suggest that children who are raised in a relatively stable environment typically show a greater prevalence of secure attachment, by definition have higher coherence, and must show higher ability to contrast their current and past thoughts and feelings, assume mental and emotional perspectives of others, and understand negative and positive feelings toward self and others compared to their insecure peers, regardless of their verbal functioning (Fonagy et al., 1991; Mesman et al., 2016; Pace, 2014; Zaccagnino et al., 2014). In addition, they are also more likely to seek help when distressed or wanting assistance from their carers (Hofer & Sullivan, 2001). This research indicates that securely attached children are able to develop skills of reciprocal communication, which in turn promotes physical, mental, emotional, and verbal development (Zaccagnino et al., 2014).

When looking across institutions, two main research issues come to light: first, there seems to be a positive association between poor employee training and lack of caregiver roles with the prevalence of insecure attachment in children (Bakermans-Kranenburg et al., 2003; Groark et al., 2005). Second, the small number of disorganised children in institutions does not support previous research showing that institutional care is marked by an increased rate of disorganisation (Lionetti, et al., 2015). This result may be explained by the fact that children with adverse early experience, such as abuse, were more likely to show disorganised attachment patterns in comparison to non-maltreated, high-risk groups (see Cyr et al., 2010). In the current study, most institutionalised children were not found to have had an early experience of maltreatment or abuse, as opposed to other research that showed an elevated degree of disorganised attachment.

8.5 The Effects of Experiences of Alternative Care and Attachment Insecurity on Children's Psychosocial Development

The results from Chapter 5 showed that institutionalised children reported more symptoms reflecting increased emotional and behavioural difficulties, less social ability and self-adaption, and lower cognitive function compared to cuddled children and those raised in biological families. Chapter 6 showed institutionalised children reporting the highest rate of insecure patterns of attachment in all three groups. Chapter 7 pulled together findings from Chapters 5 and 6 with the aim of embedding them in the attachment framework, and specifically linking the findings to previous research on attachment, mental health, behavioural problems, social adaptation, and self-perception in children raised in different care settings. Chapters 5 and 6 raised the hypothesis that children living in institutional care who were classified as insecurely attached were more likely to report challenges in psychosocial development.

Chapter 7 found that children raised in institutions, regardless of attachment insecurity, self-reported lower social satisfaction, competence, and self-esteem. The result indicates that the type of residency in itself underpinned this finding, reflecting the child's isolation from their family via abandonment (Baptista et al., 2013; Guedeney et al., 2011). This pattern of findings is consistent with other studies that looked at social efficacy in institutionalised children (Han & Choi, 2006; Jia & Tian, 2010), which have suggested increased feelings of loneliness resulting from children's failure to take advantage of social relationships due to the lack of social opportunities. These feelings may lead to a developmental cascade across different indices of adaptation, with subsequent decreased feelings of self-esteem, and heightened negative effects (Masten & Cicchetti, 2010).

While institutionalisation was linked to some indices of developmental outcome, attachment was found to be the most important factor across different developmental domains, supporting the theoretical assumption that attachment insecurity is a risk factor for poor outcomes (DeKlyen & Greenberg, 2016). Specifically, the results from Chapter 7 showed attachment having an effect on anxiety, loneliness, social competence, externalising behaviour, and total difficulties. These findings are in line with longitudinal

and cross-sectional empirical evidence (e.g., Bohlin et al., 2000; Boldt et al., 2014), that has consistently found children with insecure patterns of attachment to be more likely to show poorer emotional, social, self-adaptation and behavioural problems.

The results of attachment have led to a particular focus in this thesis on the specific patterns associated with developmental outcomes. Positive adaptation was likely to develop with a history of security. Secure children were able to show higher competence and psychosocial adjustment regardless of where they lived. On the other hand, disorganised children, in accordance with earlier studies in middle childhood (Brumariu et al., 2012; Granot & Mayseless, 2001), were expected to show an increased link with poor outcomes, even though the number of disorganised children in the study was too small to draw a conclusive result. The mixed evidence of association between insecure classifications (dismissive and preoccupied) in middle childhood and developmental challenges (Boldt et al., 2014; Kerns & Brumariu, 2014) suggest a need for further exploration.

8.6 Limitations

This thesis represents an exploration of the development of three groups of children – those raised in alternative care (in institutions and with cuddling families), and those who live with their biological parents. It is recognised that children of unknown parenthood were rejected in Saudi society, abandoned to the care of institutions, and more recently to adoptive families. These children's backgrounds were initially hidden, because those who had custody over them were fearful that the children would be stigmatised based on their unknown parental status (Rutter, 2000).

The results of this thesis are important in highlighting that children raised in alternative settings are at increased risk of poor attachment relationships with caregivers, and that this outcome conveys a significant risk for development. The thesis has demonstrated the effect of care settings and caregiving roles. There are some limitations in terms of methodology: participants in the institutional care environment study (Chapter 3), from both home- and ward-based institutions, made up less than half the targeted number. This, therefore, reduced the opportunity to capture the important heterogeneity between institutions to obtain a clear picture of the ecology of

institutional care, and especially in the areas related to caregiving and training.

The sample size across the key groups in the thesis was small. This limitation has a significant effect in relation to capturing several aspects of the research, and lowering statistical power across results. The number of children in the study in part reflected the nature of alternative care groups in Saudi Arabia. The number of children in middle childhood residing in institutional care has dropped significantly, owing to a new policy that promotes the family solution (new foster care programme, early cuddling). Therefore, the children in this study came from both types of institutions: family-based, which represent the majority, and ward-based. This switch to different forms of care and recruitment was, however, compounded by the fact that the cuddled group was extremely hard to access, with many families refusing to take part in this or similar studies. The challenge in recruiting children from the CC community is that many do not know they are living with non-biological parents, and that participation might increase the likelihood of the child finding out about their background.

Another limitation of the research is that no Arabic speaker had previously passed the FFI before conducting this study. This led to training a bilingual speaker with a psychology degree to fill the inter-rater reliability role. Before conducting the final inter-rating, the rater had to go through similar training themselves, and to rate 20 different scenarios.

8.7 Conclusions and Future Research

The current study represents a significant contribution to understanding the association between alternative care settings, attachment relationships, and psychosocial functioning in the Saudi Arabia context, including a unique portrayal of three groups of children and their attachment representations. It provides a valuable comparison of psychosocial functioning of children in alternative care versus typically developing children. Data in the present study were obtained utilising a multi-method approach (attachment interviews, psychological measures, and an institutional questionnaire) with a multi-informant design (children, primary carers, teachers, institutional staff), which provided a wide perspective of the child's development. Additionally, the current study involved various people who helped collect data (school counsellors, psychologists, and social workers). Moreover, different

developmental domains were assessed, such as mental health, social and self-adaption, behavioural problems, cognitive functioning, and attachment relationships. The measures included are psychometrically robust and widely-used in the field of psychology in cross-cultural research.

The current results highlighted the utility of attachment theory in understanding development throughout the middle-childhood phase (Granot & Mayseless, 2001). The study explored attachment by looking at normativity and child competence as theoretically hypothesised; some authors suggest looking at carers' sensitivity and responsiveness to children's signals as a predictor of security in cross-cultural attachment research (van IJzendoorn, 1990). This would allow an examination of whether children with more responsive caregivers are more likely to develop a secure attachment than children with less attentive caregivers.

This study used the attachment concepts in capturing carer-child relationships in alternative care, and to help facilitate the development of new models that can suit all types of care settings (Schofield, 2005). In conjunction with Bronfenbrenner's (1979) theory on the ecology of human development, and specifically that variability of development is a function of context and person (Darling, 2007), these models will work to minimise the risk factors that children in alternative care might be exposed to. Their aim is to enhance the carer-child relationship quality, and buffer any negative effects.

In line with research on institutionalisation and adoption, the findings support the view that psychosocial adjustment, cognitive development, and attachment are at greater risk in children who have been placed in institutional care at an early age. In the Saudi situation, even though services and programmes to improve different personal and social aspects of children's lives were provided, the lack of training and vagueness of the caregiving role, along with the higher prevalence of attachment insecurity, underline concerns about the children's well-being. Moreover, there is an argument around which specific type of deprivation contributes to the difference in development between institutionalised and non-institutionalised children (Maclean, 2003). These findings therefore suggest the importance of making an effort to improve all aspects of care, including the quality of institutional caregiving, in Saudi Arabia, and to consider caregiving in both the current institutional context and the new programme of foster care (social

homes), to offer a high standard of training and quality care, as well as structural changes that will, in turn, offer a secure, responsive, and sensitive caregiving environment (Groark et al., 2005; Zaccagnino et al., 2014).

A reasonable approach for tackling this issue could be to establish guidelines in line with Edwards & Raikesy's (2002) proposal. Accordingly, either the current institutional care or future foster care should be designed to promote the development of attachment with one primary caregiver, whilst promoting the continuity of family groups. During shift time, there should be one or a few secondary people consistently playing the caregiver role. Furthermore, it is critical to consider carer's commitment to endure a relationship with a child. Caregivers who are highly motivated to care for children are more likely to effectively ensure the child's welfare (Lindhiem & Dozier, 2007). Dozier & Lindhiem (2006) suggested designing a system that enhances caregivers' commitment and emphasises more stability and placing few children with each caregiver. In addition, there should be practices that allow multi-age groups with one primary carer. Appropriate training is important in enabling caregivers to be socially responsive with the children they have elected to care for. This approach would offer an opportunity for researchers to study and follow-up children and their primary caregivers longitudinally, as well as to generalise the findings, as it allows for data collection at every step.

The additional significance of the current findings is that, although institutionalised and cuddled children had developmental origins related to early abandonment soon after birth, the outcomes between groups were significantly different. The findings have important implications for the development of strategic government policy relating to alternative care in Saudi Arabia, indicating the importance of the family in Saudi society. The results suggest that the opportunity to move into a family setting early in development represents a significant advantage for psychosocial adjustment and attachment organisation for young children who are unable to live with their biological parents. The cuddling system in Saudi Arabia places children at an early age, and this policy could moderate the negative effect of abandonment. The positive psychosocial adjustment observed in this group may be explained by the cuddling parents' high motivation and dedication. Therefore, cuddling parents who successfully overcome cultural challenges to cuddle a child are more likely to invest in the child's well-being. A key policy

priority should therefore be to plan for long-term care by developing programmes that help cuddling families deal with challenges, such as legal procedures, the child's anonymity and openness and developing parenting skills.

Finally, as it seems that the majority of Saudi Arabia's abandoned children have been given up because of illegitimacy, some effort should be implemented to prevent abandonment. For example, policies and services should make it possible for birth families to stay together with their children without becoming socially stigmatised. To avoid child abandonment and support these children to unite with their biological families, it is important to bring social assistance in place, such as preparing maternity social workers to recognise and manage these situations, providing parents training and programmes that raise community awareness of this group of people and their right to live together. In addition, applying policies that facilitate official birth registration for those children will help reduce child abandonment.

The findings add weight to the growing body of evidence showing that the timing of a child's cuddling, and carers' higher motivation, are crucial factors in positive psychosocial development, cognitive function, and attachment organisation. Therefore, they favour placing institutionalised infants as early as possible in a family environment that has been proven able to provide a 'safe haven and secure base'. However, it remains unclear in Saudi society whether the characteristics of the infant evoke the attention and warmth of the adult caregiver, or that children are fortunate enough to have an involved and sensitive carer to take care of them regardless of their individual characteristics (Zeanah et al., 2005). Future research should aim to evaluate parent/carer perceptions and tendencies towards children in care (institution, cuddling) when looking at the children's behavioural traits in or before middle childhood. Further exploration with regard to other important factors, such as parenting styles, could add significant weight to the body of research.

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Appendix A Scales and Questionnaires

Appendix A.1: INSTITUTIONAL CARE IN SAUDI ARABIA

This brief survey is designed to help us better understand and describe institutional care environments in Saudi Arabia. Please note that it is not intended to evaluate the care setting.

Below are a series of questions and statements related to institutional care. For each statement you are asked to tick the response that best describes your experience in the institution where you work. For some statements, you might want to add an additional response. The survey will take around 15-20 minutes to complete.

Please read each statement carefully, and tick the appropriate alternative(s) or add your own response.

Institution name:
I am:

- The head ☐
- A psychologist ☐

1. THE INSTITUTION POLICY AND STRUCTURE

This section looks at how the institution is structured.
1.1. The institution is designed as (please tick the appropriate description):

- Home: Flat/villa ☐
- Wards ☐
- Other: Please specify:

1.2. The institution provides (please tick the appropriate description):

- Permanent or long-term residency ☐
- Temporary or short-term residency ☐
- Both types ☐

1.3. The institution places (please tick the appropriate description):

- Same aged children together ☐
- Different aged children together ☐
- Other: Please specify:

1.4. The institution places (please tick the appropriate description):

- Only the same gender together ☐
- Mixed gender together ☐
- Other: Please specify:

1.5. The institution places children who have specific health conditions (e.g. physical disability, long-standing illnesses like diabetes) (please tick the appropriate description):

- Together with those who have only similar health conditions ☐
- Together with those who have the same or different health conditions ☐
- Other: Please specify:

1.6. How many children between 0-18 are in the institution?

- 1-10 children ☐
- 11-20 children ☐
- 21-30 children ☐
- 30+ children ☐

1.7. How many children are in each ward/flat/villa? (please tick the appropriate description):

- 1-5 children ☐
- 6-10 children ☐
- 11-15 children ☐
- 15+ children ☐

1.8. Typically children share a bedroom with (<u>please tick the appropriate description</u>):

- 1-2 children ☐
- 3-4 children ☐
- 4-6 children ☐
- 6+ children ☐

1.9. The institution provides (tick only those that apply):

☐ Well lit rooms and common areas
☐ A bed and wardrobes
☐ A dining room
☐ A classroom
☐ A space for training
☐ Free access to play area with toys
☐ Free access to computers and internet
☐ Free access to the library
☐ Free access to Arts and crafts tools
☐ Free access to the recreational activity room
☐ Free access to TV
☐ Other: Please Specify:

1.10. Children move to different section or institution when they reach such developmental milestones, or for a different reason:

- Yes ☐
- No ☐

If yes, a move to a different section or institution would depend on the child's: (Tick only those that apply.)

☐ Gender
☐ Age
☐ Behaviour
☐ Relationships with other children

☐ Relationships with carers

☐ Request to move

☐ Other: Please Specify:

1.11. How many staff members are in the institution?

1.12. How many primary carers are in each ward/flat/villa? (Please tick the appropriate description):

1-3 primary carers ☐

4-6 primary carers ☐

6 + primary carers ☐

1.13 How many hours do carers and staff work per day? (Please tick the appropriate description):

7-8 hours ☐

9-16 hours per day ☐

16+ hours per day ☐

Carers and/or staff reside with children ☐

Other: Please specify:

1.14 Are there criteria to choose the caregiver?

Yes ☐

No ☐

If yes, can you choose that all applicable from the list? (Tick only those that apply)

☐ Gender
☐ Age
☐ Educational qualifications
☐ Professional training qualifications
☐ Previous work experience
☐ Adults who had been raised in institutions
☐ Other: Please Specify:

2. ADJUSTING SCHOOL PROBLEMS, DAILY LIFE SKILLS AND SOCIAL AND EMOTIONAL DEVELOPMENT

This section looks at opportunities for to children manage school difficulties and learn different life skills and the way to develop social and emotional aspects. Please rate each statement based on how frequently the events below occur; where (1) is never, 2 is occasionally (once or twice a month), (3) is frequently

(once or twice a week), and (4) All the time (most days). Please add further comments for other, where necessary.

2.1. Children can get help to sort out school problems:

	Never	Occasionally	Frequently	All the time
In group classes	1	2	3	4
In Individual classes	1	2	3	4
By themselves	1	2	3	4
Other: Please Specify:				

2.2. The institution teaches children about:

	Never	Occasionally	Frequently	All the time
Budgeting	1	2	3	4
Tidying their room	1	2	3	4
Personal hygiene	1	2	3	4
Shopping	1	2	3	4
Preparing food	1	2	3	4
Health and safety	1	2	3	4
Other: Please Specify:				

2.3. Children gain social and emotional skills (e.g. making connections and communicating with others) through:

	Never	Occasionally	Frequently	All the time
Conversations with carers/ staff	1	2	3	4
Conversations with peers/ friends	1	2	3	4
Planned programmes	1	2	3	4
Other: Please Specify:				

2.4. Children have the opportunity to take part in activities that allow them to:

	Never	Occasionally	Frequently	All the time
Develop social and emotional skills (e.g., fostering friendships)	1	2	3	4
Engage with carers and staff (e.g., playing together).	1	2	3	4
Other: Please Specify:				

2.5. Think about how often children engage in activities that bring people to the institution or that take the children into the community:

	Never	Occasionally	Frequently	All the time
Children invite friends/ peers from school	1	2	3	4
Children visit friends/ peers from school	1	2	3	4
Children plan activities in the community (e.g. schools)	1	2	3	4

Children participate in activities in the community (e.g. schools)	1	2	3	4
Other: Please Specify:				

3. Staff and caregivers

This section looks at the caregiving provided to children.

3.1. Please rate each statement based on how much you agree or disagree with it; where (1) is strongly disagree and (5) is strongly agree.

		1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
1.	Caregivers and staff do paperwork anywhere (e.g.at the kitchen table) *	1	2	3	4	5
2.	Caregivers always try to follow procedures *	1	2	3	4	5
3.	Caregivers adopt an empathetic approach with children	1	2	3	4	5
4.	Caregivers only work to fulfil the basic demands (e.g. feeding, cleaning) *	1	2	3	4	5
5.	Caregivers discuss the child's own behaviour with them	1	2	3	4	5
6.	Caregivers look after younger children most of the time *	1	2	3	4	5
7.	Caregivers spend time reading with children *	1	2	3	4	5
8.	Caregivers have a large number of children to look after	1	2	3	4	5
9.	Caregivers have at least one daily meal with children *	1	2	3	4	5
10.	Caregivers are required to have individual plans for each child	1	2	3	4	5
11.	Caregivers have two days off every week	1	2	3	4	5
12.	Caregivers spend time with children listening and talking *	1	2	3	4	5
13.	Caregivers take a long annual leave	1	2	3	4	5
14.	Caregivers form supportive relationships with children *	1	2	3	4	5
15.	Caregivers work on shift rotate and between 7-8 hours a day	1	2	3	4	5
16.	Caregiving emphasizes basic developmental skills (e.g., talking)	1	2	3	4	5
17.	Caregivers style emphasises psychosocial development *	1	2	3	4	5
18.	Children meet different caregivers every day.	1	2	3	4	5

19.	Caregivers display positive emotions with children *	1	2	3	4	5
20.	Caregivers display a warm demeanour	1	2	3	4	5

* Items were included in the analysis

3.6. Opportunities for caregivers and staff to receive training is typically (please tick):

- Every three months ☐
- Every six months ☐
- Once a year ☐
- Other: Please specify:

3.7. Staff and carers receive training related to different parts of their job role including:

	Never	Occasionally	Frequently	All the time
Professional caregiving	1	2	3	4
Children's well-being and resiliency	1	2	3	4
Their own well-being and resiliency	1	2	3	4
Other: Please Specify:				

3.8. Staff and caregivers get together to:

	Never	occasionally	Frequently	All the time
Learning from mistakes	1	2	3	4
Share knowledge	1	2	3	4
Build teams	1	2	3	4
Problem solving	1	2	3	4
Other: Please Specify:				

4. Please add anything you feel it is important to share that describes the institutional environment in further detail:

Appendix A.2: Loneliness Questionnaire

QUESTIONNAIRE ITEMS

Put a circle around the number that shows how much you feel something is true for you:

1 = Not true at all 2= Hardly ever true 3= Something true

4= Mostly true 5= Always true

	Source	Target
1.	It's easy for me to make new friends at school.	It's easy for me to make new friends at school.
2.	I like to read.*	I like to read.
3.	I have nobody to talk to.	I have nobody to talk to.
4.	I'm good at working with other children.	I am good at working with other children.
5.	I watch TV a lot.*	I watch TV a lot.
6.	It's hard for me to make friends.	I find it difficult to make friends.
7.	I like school.*	I like school.
8.	I have lots of friends.	I have lots of friends.
9.	I feel alone.	I feel alone.
10.	I can find a friend when I need one.	I can find a friend when I need one.
11.	I play sports a lot.*	I play sports a lot.
12.	It's hard to get other kids to like me.	It's hard to get other kids to like me.
13.	I like science	I like science
14.	I don't have anyone to play with.	I don't have anyone to play with.
15.	I like music.*	I like music.
16.	I get along with other kids.	I get along with other kids.
17.	I feel left out of things	I feel unwanted.**
18.	There's nobody I can go to when I need help.	There's nobody I can go to when I need help.
19.	I like to paint and draw.	I like to paint and draw
20.	I don't get along with other children.	I don't get along with other children.
21.	I'm lonely.	I am lonely
22.	I am well-liked by the kids in my class.	The children in my classroom like me so much.**
23.	I like playing board games a lot.*	I like playing board games a lot.
24.	I don't have any friends.	I don't have any friends.

* Filling items. ** Adapted statement.

Appendix A.3: What I Am Like

(Susan Harter, Ph.D., University of Denver, 2012)

Name_____ Age____ Birth Date _____ ☐ Boy ☐ Girl

You will find in your hands a set of 12 statements, each consisting of two different sections, one on the right of the paper and the other on the left, with the word "but" in between. You are asked to:

- Read the statements carefully. Then choose the section that suits you best or describe you from each statement. Remember that you cannot select both sections of a single statement.
- - Next to each section of every statement there are two tic-boxes (Really True for me or Sort of True for me) to rate to which extent you agree with it. Please choose only one option.

Note that there are no correct or wrong answers, but only to know how you describe yourself.

1.	Source	Some kids find it hard to make friends	BUT	Other kids find it pretty easy to make friends
	Target	Some kids find it hard to make friends		Other kids find it pretty easy to make friends
2.	Source	Some kids are often unhappy with themselves	BUT	Other kids are pretty pleased with themselves
	Target	Some kids are often unhappy with themselves		Other kids are pretty pleased with themselves
3.	Source	Some kids know how to make classmates like them	BUT	Other kids don't know how to make classmates like them
	Target	Some kids know how to make classmates like them		Other kids don't know how to make classmates like them
4.	Source	Some kids don't like the way they are leading their life	BUT	Other kids do like the way they are leading their life
	Target	Some kids don't like the way they are leading their life		Other kids do like the way they are leading their life
5.	Source	Some kids don't have the social skills to make friends	BUT	Other kids do have the social skills to make friends
	Target	Some kids don't have social skills that enable them to make friends **		Others have social skills that enable them to make friends **
6.	Source	Some kids are happy with themselves as a person	BUT	Other kids are often not happy with themselves
	Target	Some kids are happy with themselves as a person		Other kids are often not happy with themselves
7.	Source	Some kids understand how to get peers to accept them	BUT	Other kids don't understand how to get peers to accept them
	Target	Some kids understand how to get peers to accept them		Other kids don't understand how to get peers to accept them
8.	Source	Some kids like the kind of person they are	BUT	Other kids often wish they were someone else
	Target	Some kids like themselves as they are **		Other kids wish they would be a different person. **
9.	Source	Some kids wish they knew how to make more friends	BUT	Other kids know how to make as many friends as they want
	Target	Some kids wish they knew how to make more friends		Other kids know how to make as many friends as they want
10.	Source	Some kids are very happy being the way they are	BUT	Other kids wish they were different
	Target	Some kids are very happy being the way they are		Other kids wish they were different
11.	Source	Some kids know how to become popular	BUT	Other kids do not know how to become popular
	Target	Some kids know how to become popular		Other kids do not know how to become popular
12.	Source	Some kids are not very happy with the way they do a lot of things	BUT	Other kids think the way they do things is fine
	Target	Some kids are not very happy with the way they do a lot of things		Other kids think the way they do things is fine

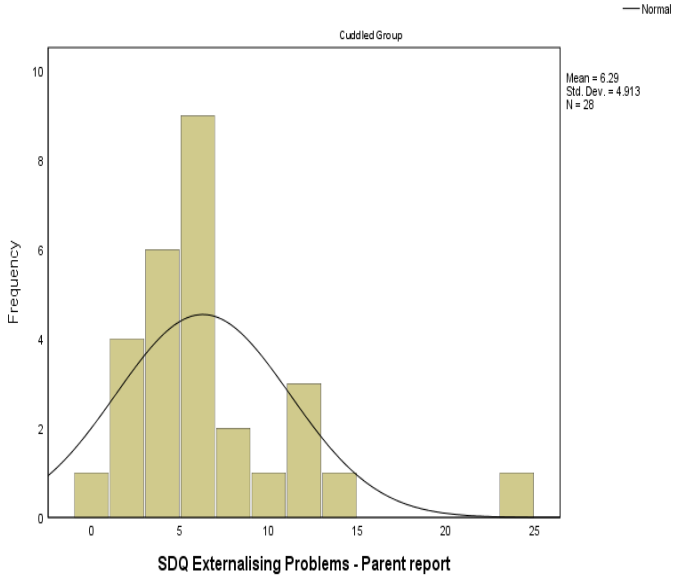
** Adapted item

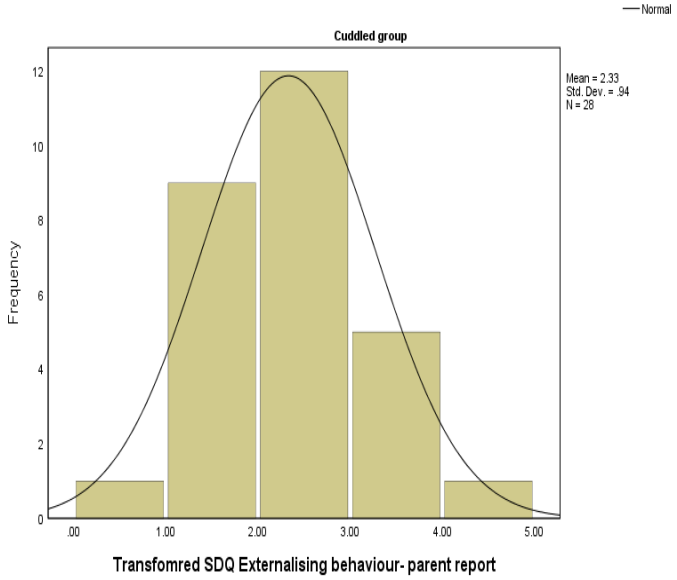
Appendix B : Tables and Figures

Appendix B.1: Correlation matrix for the 16 LSDS items

	17	21	18	12	14	20	24	9	3	16	4	10	8	1	22	6
17 - I feel left out of things (unwanted).		.53	.35	.45	.47	.38	.37	.34	.31	.07	.05	.08	.30	.21	.16	.23
21 - I'm lonely			.26	.36	.39	.31	.29	.28	.24	.11	.09	.11	.28	.21	.16	.20
18 - There's nobody I can go to when I need help.				.22	.22	.19	.19	.17	.15	-.05	-.06	-.05	.08	.03	.02	.11
12 - It's hard to get other kids to like me					.32	.26	.25	.23	.21	.09	.07	.08	.23	.17	.13	.16
14 - I don't have anyone to play with						.28	.26	.25	.22	.16	.14	.15	.23	.23	.18	.18
20 - I don't get along with other children							.21	.20	.18	.08	.06	.07	.20	.15	.11	.15
24 - I don't have any friends								.19	.17	.06	.05	.06	.18	.13	.10	.13
9 - I feel alone									.16	.08	.07	.08	.19	.14	.25	.13
3 - I have nobody to talk to										.08	.06	.07	.17	.13	.10	.12
16 - I get along with other kids											.33	.32	.32	.30	.23	.1
4 - I'm good at working with other children												.31	.30	.28	.22	.08
10 - I can find a friend when I need one													.29	.28	.22	.09
8 - I have lots of friends														.33	.25	.16
1 - It's easy for me to make new friends at school															.23	.13
22 - I am well-liked by the kids in my class																.10
6 - It's hard for me to make friends																

Appendix B.2: Normality histogram of externalising behaviour subscale before and after square root transformation for cuddled group in chapter 5



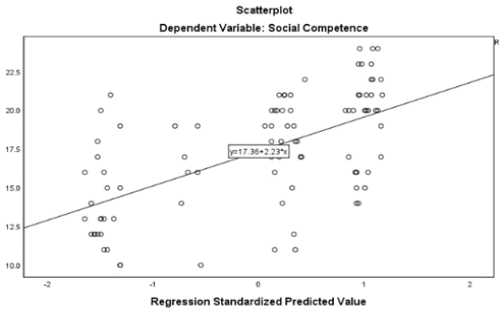


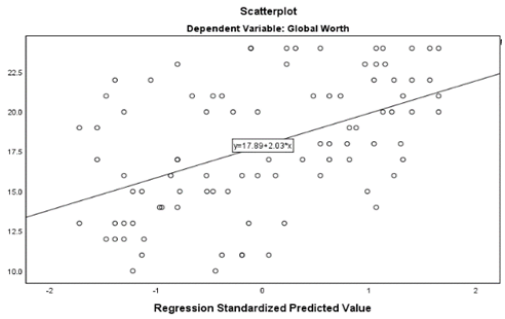
Appendix B.3: Data presented for Shapiro-Wilk test, skewness and kurtosis z-scores of scales that did not show normal distribution of the SDQ externalising problems of carer version and SDQ internalising problems of the teacher version before and they were being square rooted in chapter 7

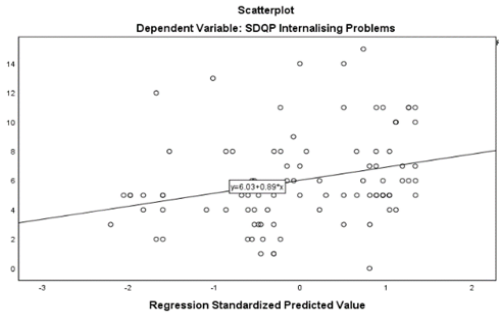
			Before transformation			After transformation		
Scale	Attachment	Group	Shapiro-Wilk	Skewness Z-score	Kurtosis Z-score	Shapiro-Wilk	Skewness Z-score	Kurtosis Z-score
Externalising problems	Secure	TD	.08	1.98	1.33	.41	.03	.66
		CC	.00	3.32	4.77	.20	.25	-1.21
		CRI	.72	-.24	-.81	.55	-.79	-.55
	Insecure	TD	.30	.84	-.73	.72	-.02	-.81
		CC	.02	2.78	3.46	.33	1.44	1.32
		CRI	.20	.57	-1.15	.40	-.42	-1.05
SDQ-T Internalising problems	Secure	TD	.19	-.49	-1.13	.13	-.93	-.85
		CC	.65	1.07	.26	.95	.17	.00
		CRI	.04	.07	-1.48	.06	-.16	-1.33
	Insecure	TD	.85	-.07	-.65	.55	-1.02	-.17
		CC	.50	.43	-.74	.68	-.04	-.61
		CRI	.20	.28	-1.32	.11	-1.55	.60
SDQ-T Total difficulties	Secure	TD	.53	-.22	-.91	.26	-.90	-.79
		CC	.23	1.14	-.34	.45	.64	-.65
		CRI	.12	-.14	-.96	.12	-.20	-1.42
	Insecure	TD	.65	.35	-.71	.62	-.29	-.84
		CC	.62	-.14	-.96	.55	-.44	-.93
		CRI	.03	.74	-1.39	.09	-.02	-1.49

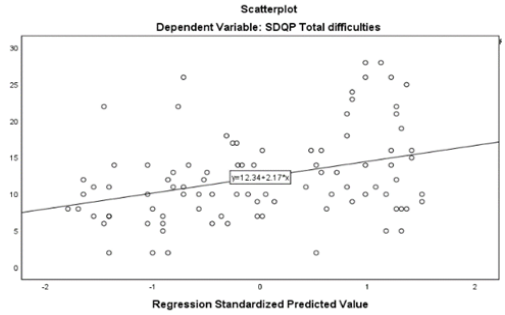
Shapiro-Wilk test $p > .05$ and Z-score between ± 2 indicate that the scale is normally distributed.

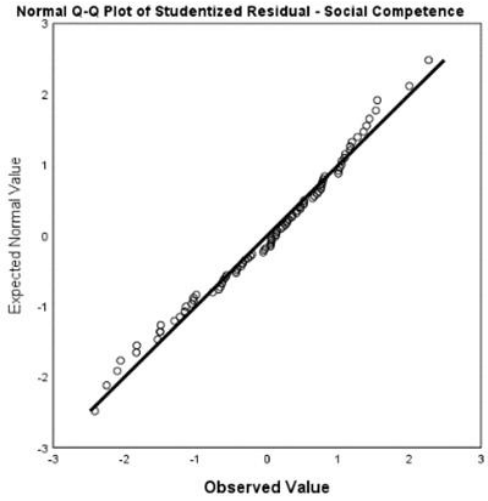
Appendix B.4: scatter plots and normality histogram and Q-Q plots for regression analyses (Chapter 7)

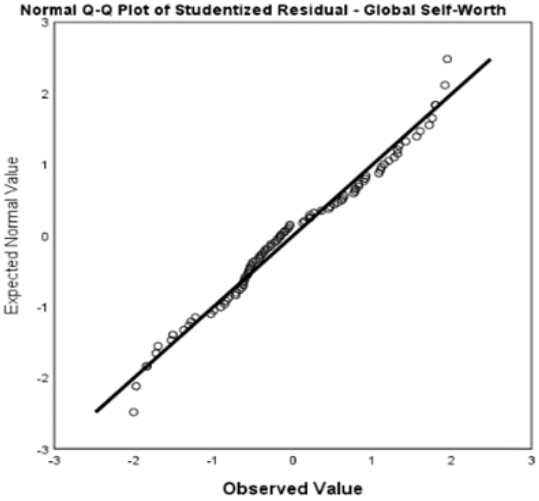


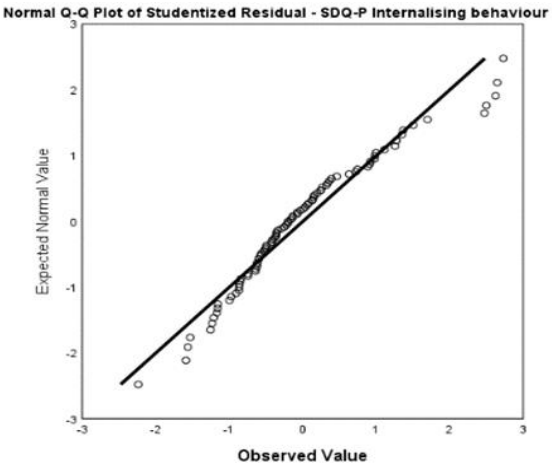


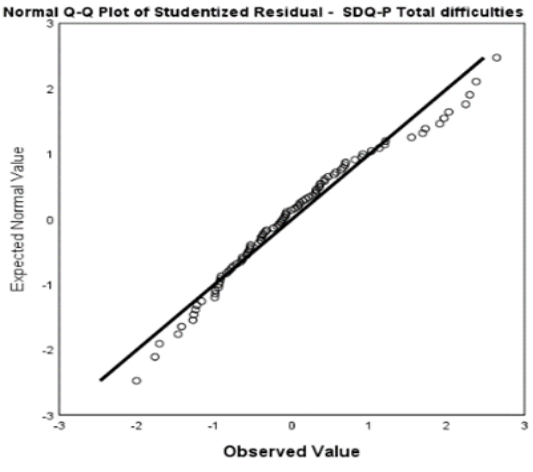












Appendix C : Informed Consents and Debriefing Statements

Appendix C.1: Participation Email for Heads and Psychologists of the institutional environment study

Study ID: 29846

I am writing to you to request your participation in a brief survey. We would like to get more information about children's experiences in institutions in Saudi Arabia. Your responses to this survey will help us understand the institutional environment.

The survey is brief and will only take about 15-20 minutes to complete. Please click the link below to go to the survey Web site (or copy and paste the link into your Internet browser).

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personal identifiable information will be associated with your responses to any reports of these data. The Ethics Committee, Psychology, University of Southampton has approved this survey. Should you have any comments or questions, please feel free to contact me at (msa3e15@soton.ac.uk). Alternatively, you can contact my supervisors. Dr. Julie Hadwin: (J.A.Hadwin@soton.ac.uk) and Dr. Jana Kreppner: (J.Kreppner@soton.ac.uk).

Thank you very much for your time and cooperation.

Sincerely,

Mohammed Aldoreeb

PhD researcher,

University of Southampton

Appendix C.2: Debriefing Statement for Heads and Psychologists

"This appeared after finishing the questionnaire"

Thank you for taking part in this study!

We would like to tell you why we asked you to do this survey and answer the questions.

Children's relationships with their parents/caregivers, families, and friends can be quite different. The answers you have given today will help us grasp better the institutional environment where some children have lived. That allows us to understand the context of children's relationships with important others and some other aspects of their development. The survey helped us also understand the differences and similarities in the way these children can interact with others.

Once again, let us remind you that the results of this study will not include any personal details such as your name and details and all information will be number coded. If you have any further questions about the study, please contact me, Mohammed Aldoreeb, msa3e15@soton.ac.uk or you can contact my supervisors Dr Julie Hadwin: (J.A.Hadwin@soton.ac.uk) and Dr Jana Kreppner: (J.Kreppner@soton.ac.uk).

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 3856, email fshs-rso@soton.ac.uk

Appendix C.3: Parent/carer Informed consent

Dear Parent/Carer

My name is Mohammed Aldoreeb. I am conducting a study as a part of my PhD program in the Department of Psychology at University of Southampton, U.K. The study involves working with institutionalised and non-institutionalised children ranging from 8-12 years of age, and with their carers. I would also like to contact the children's school teachers. The study will explore children's attachment patterns with their primary caregiver and friends. A further aim is to explore the associations between attachment patterns and children's emotional and behavioural development. Comparisons will be made between children raised in institutions and children who do not live in an institution.

An interview about relationships with caregivers and friends will be conducted with children, and they will also be asked to complete a number of questionnaires. Questionnaires cover different aspects of their internalising behaviours (e.g., anxiety and depression), social life functioning (e.g., loneliness, and self-perception) and parenting experiences (e.g., attachment representation). All sessions will be audiotaped. In addition, carers will be asked to complete a demographic form and a questionnaire that measures their children's behaviours and thoughts. Teachers will be asked to complete a version of the same questionnaire that parents completed. Nobody else except me and other researchers involved in this study, will see any of both your or child's answers and no names or identifying information will be disclosed when writing up this study. I will assure that the individual children and carers' information and data will not be disclosed to anyone outside the immediate research team unless there is a potential risk for the child. In this case, I will discuss the risk with a relevant responsible person who is in charge (e.g. primary caregiver, counsellor etc.).

If you are happy for you and your child to take part in this study please sign below. Please tick the box (*es*) if you agree with the statement(*s*):

☐ I have read and understood the information sheet and have had the opportunity to ask questions about the study.

☐ I give consent for me and my child to take part in this research project, the interview being audiotaped and agree for his or her data to be used for the purpose of this study.

☐ I understand that my and my child's participation is voluntary and that I and/or my child may withdraw any time without our legal rights being affected.

Participant's name …… **signature** ……**.. Date** ……..

Yours faithfully

Mohammed Aldoreeb

If you have, any questions please do not hesitate to contact me via my email address (msa3e15@soton.ac.uk) or you can contact my supervisors Dr Julie Hadwin: (J.A.Hadwin@soton.ac.uk) and Dr Jana Kreppner: (J.Kreppner@soton.ac.uk).

Appendix C.4: Teacher Informed consent

Dear Teacher

My name is Mohammed Aldoreeb. I am conducting a study as a part of my PhD program in the Department of Psychology at University of Southampton, U.K. The study involves working with children ranging from 8-12 years of age, and with their carers in your institution. I would also like to contact the children's school teachers. The study will explore institutionalised and non-institutionalised children's attachment patterns with their primary caregiver and friends. A further aim is to explore the associations between attachment patterns and children's emotional and behavioural development. Comparisons will be made between children raised in institutions and children who do not live in an institution.

An interview about relationships with caregivers and friends will be conducted with children and they will also be asked to complete a number of questionnaires. Questionnaires cover different aspects of their internalising behaviours (e.g., anxiety and depression), social life functioning (e.g., loneliness, and self-perception) and parenting experiences (e.g., attachment representation). In addition, carers will be asked to complete a questionnaire that measures their children's behaviours and thoughts. You as a **teachers will be asked to complete a version of the same questionnaire that parents completed.**

Nobody else except me and other researchers involved in this study, will see any of both your or student's answers and no names or identifying information will be disclosed when writing up this study. I will assure that the individual children, carers and teachers' information and data will not be disclosed to anyone outside the immediate research team unless there is a potential risk for the child. In this case, I will discuss the risk with a relevant responsible person who is in charge (e.g. primary caregiver, counsellor etc.).

If you are happy to take part in this study please sign below.

Please tick the box (*es*) if you agree with the statement(*s*):

☐ I have read and understood the information sheet and have had the opportunity to ask questions about the study.

☐ I give consent to take part in this research project and agree for data to be used for the purpose of this study.

☐ I understand that my participation is voluntary and I may withdraw at any time without our legal rights being affected.

Teacher's name …… **signature** ……**.. Date** ……

Yours faithfully

Mohammed Aldoreeb

If you have, any questions please do not hesitate to contact me via my email address (msa3e15@soton.ac.uk) or you can contact my supervisors Dr Julie Hadwin: (J.A.Hadwin@soton.ac.uk) and Dr Jana Kreppner: (J.Kreppner@soton.ac.uk).

Appendix C.6: Child Assent Form

My name is Mohammed Aldoreeb. I am trying to understand how children think and behave with their parents and peers. I need your help to do this project. I will explain this study by reading the full information to you. Then, I will ask you some questions about your thoughts and behaviours. I will audiotape this session for the research purposes. No one apart from the researchers involved in this study will see or listen to your answer. If there is any type of risk on you, I would tell your parent or counsellor to ensure that you are safe.

Later, we will talk about anything that you like.

There are no right or wrong answers to these questions.

It is your decision whether you want to take part or not. If you decide to stop talking at any time, you can do so. You can also choose not to answer some questions if you don't want to. It is helpful for me, if you can answer all of them.

If you are happy to help us, please answer the questions below and sign your name.

Please circle the answer you agree with:

Has somebody explained this project you?	Yes ○	No ○
Do you understand what this project for?	Yes ○	No ○
Do you understand this interview is audiotaped?	Yes ○	No ○
Have you asked all the questions you want?	Yes ○	No ○
Have someone answered your questions in a way you understand?	Yes ○	No ○
Do you understand it is okay to stop talking at any time?	Yes ○	No ○

If you have answered yes to all above questions,

Please sign your name to show you are happy to take part.

Name: _____ Signature: _____

Appendix C.7: Debriefing Statement for Parents and Primary carers

Thank you for taking part in this study!

We would like to tell you why we asked your children to do the interview and answer the questions .

Children's relationships with their parents/caregivers, families, and friends can be quite different. The answers you and your child have given today will help us understand better the relationships between children's relationships with important others and some other aspects of their development, such as how they feel about themselves and how they behave with others. The interview and questionnaires helped as also understand the differences and similarities in the way these children can interact with others.

Once again, let us remind you that the results of this study will not include any personal details such as your name and details and all information will be number coded. If you have any further questions about the study, please contact me, Mohammed Aldoreeb, (msa3e15@soton.ac.u) or you can contact my supervisors Dr Julie Hadwin: (J.A.Hadwin@soton.ac.uk) and Dr Jana Kreppner (J.Kreppner@soton.ac.uk).

If you have any questions or feel worried about anything we asked you to do please let me know so we can talk about it.

If you have questions about your rights as a participant in this research, or if you feel that you or your child have been placed at risk, you may contact the Research and Graduate Office at the University of Southampton (02380 595058, rgoinfo@soton.ac.uk) who will be happy to help or discuss your concerns.

Appendix C.8: Demographic form

Personal information

Child's Name:			
Age:		Date of birth:	
Gender:	☐ Boy		☐ Girl

Education

School year	

Achievement level ☐ Excellent ☐ Very Good ☐ Good ☐ Below average

Carer information

Name _____

Age

Gender ☐ Male ☐ Female

Education

Education level	

Contact Number (Optional) _____

Relationship status:

I am currently:

☐ Married ☐ Divorced ☐ Single ☐ Prefer not to say

In our household:

☐ I am the primary caregiver.

☐ I help my partner who takes most of the responsibilities for the child.

This information is confidential and will not be shared with anyone unrelated to the research

Do you have other children? ☐ No ☐ Yes, No. of Children____

For institutionalised children:*

How many care setting has the child experienced? _____

Does the child have issues related to the previous carer? ☐ No ☐ Yes

If yes, please specify it:

_____

_____

For cuddled children:

How long has your child been with you? _____

Has your child been cuddled before you adopted him/her? ☐ No ☐ Yes

If yes, please give more details (e.g. when was that? How long had the child been cuddled?)

_____
_____

Why did you cuddled a child?

☐ Religious purpose ☐ Not having children ☐ Other: please specify

* Note: every group has the form with the appropriate questions that relative to it and the rest was deleted.

This information is confidential and will not be shared with anyone unrelated to the research