Playfulness in preschool children: A preliminary investigation into the impact of parental characteristics and child abuse and neglect

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ABBREVIATIONS

AAI	Adult Attachment Interview
ABS	Australian Bureau of Statistics
ADC	Attachment Disorder Checklist
ADHD	Attention Deficit Hyperactivity Disorder
AIFS	Australian Institute of Family Studies
DECD	Department for Education and Child Development
DECS	Department of Education and Children's Services
LSAC	Longitudinal Study for Australian Children
MM	Mind Mindedness
SEIFA	Socio-Economic Indexes for Areas
SES	Socioeconomic status
ToM	Theory of Mind
ToP	Test of Playfulness

SUMMARY

The importance of playfulness as an essential attribute for occupational therapists to consider has been demonstrated by its significant links with coping skills, creativity and divergent thinking. Consequently, it is a particularly important attribute for young children, though few studies have examined playfulness in preschool children, and existing studies have tended to have very small sample sizes. Further, recent research has examined playfulness in children with a range of disabilities. However, very little research has been conducted into potential precursors of playfulness such as parenting practices, parent characteristics and security of attachment, particularly studies that use rigorous methods of measuring playfulness in children. Such research is vital, as further investigation of potential precursors may provide direction for the development of effective interventions.

The current investigation consisted of three exploratory studies. The first study examines playfulness in a sample of 118 preschool children in metropolitan Adelaide. The second study, in a sample of 122, aims to investigate whether parental mind mindedness (ability to view one's child as an individual with his or her own mental state), parenting practices, parent playfulness and/or children's attachment behaviour are associated with playfulness in these children. The third study examines both descriptive statistics and the playfulness profiles of a small group of 5 children who have experienced child abuse and/or neglect in order to determine whether there are differences in playfulness between participants in study 2 and study 3.

All children were assessed using the Test of Playfulness, conducted by videotaping a 15 minute observation of outdoor free play at preschool. The observations were then coded by an independent rater. Raw scores were converted into interval scores using Rasch analysis.

Results indicated that playfulness levels in preschool children in metropolitan Adelaide (M= -.604; SD = 1.49) would seem to be similar to that of a small sample in the USA. Study 2 results indicated that there were small relationships between children's playfulness and both parent mind mindedness (r=.19, p=.05) and dysfunctional attachment behaviours in children (r= -.23, p=.05). However, no other relationships were

found between children's playfulness and the other potential precursors examined. Finally, the playfulness profiles of children in study 3 were examined in relation to the mean scores of items for study 1, and the trend seemed to indicate that children who have experienced child abuse and/or neglect tended to have difficulty with playfulness items relating to shared internal control. These items included aspects such as the extent of social play, the skill of sharing, the skill of negotiating and the skill of initiating. However, because of the small sample, these observations cannot be generalised to all children who have experienced child abuse and/or neglect.

Possible explanations for differences in play profiles are discussed. Potential explanations for the results in all studies are explored, in particular the measurement issues in relation to playfulness. Finally, the implications for the measurement of both child and adult playfulness are discussed, along with suggestions for potential interventions.

DECLARATION

I declare that:

This thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university;

To the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.

Signed

_____

Shelley Wright

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CHAPTER 1 - INTRODUCTION

> "Given that children do play, it is important to ask how and why they do so and whether such activity is fruitful for development" (Rubin, Fein, & Vandenberg, 1983, p. 694).

Playfulness is an important attribute for young children because it is associated with coping skills and adaptability (Ruckser-Scherb, 2010; Saunders, Sayer, & Goodale, 1999). Consequently, the need to consider playfulness when working with young children in a therapeutic or educational context is evident. Therefore, it is important to understand what nurtures playfulness so that interventions can be appropriately targeted. While there is some understanding of environments that facilitate playfulness (as described by Barnett & Kleiber, 1984; Bishop & Chace, 1971; Skard & Bundy, 2008), further exploration of specific family and personal characteristics that may contribute to playfulness is needed. This thesis will explore such characteristics and will also describe a model of playfulness. Potential relationships within the model will be investigated.

This thesis will draw upon attachment theory as a framework from which to examine playfulness in preschool children. It will explore potential precursors or correlates of playfulness, including potential personal and family characteristics that have either been found to relate to playfulness or which are theoretically supported. The thesis also includes a more in-depth examination of playfulness specifically in children who have experienced abuse and/or neglect. Playfulness has been associated with adaptive coping skills (Hess & Bundy, 2003; Saunders et al., 1999), hence this is a particularly important attribute for young children to develop, especially those who have experienced child abuse and/or neglect. The research in relation to parenting suggests lower levels of playfulness in adults who have parenting difficulties or disrupted attachments with their children (Baumrind, 1994). The extent to which quality of parenting and attachment relationships in turn impact on children's playfulness also warrants further investigation.

This thesis comprises three exploratory studies which are conducted in two phases. The first phase includes studies 1 and 2. Study 1 aims to examine playfulness in South Australian preschool children and to ascertain whether there are any relationships with variables relating to personal or family characteristics. Study 2 examines whether

parental mind mindedness (i.e. the ability to view one's child as an individual with his or her own mental state), parenting practices, parent playfulness and/or children's attachment behaviour are related to playfulness in children. The second phase includes study 3 which examines the nature of playfulness in preschool children who have experienced abuse and/or neglect.

Playfulness in children is largely defined as a child's disposition to play (Barnett, 1990) or approach to play (Bundy, 2005). Consequently, playfulness in children is usually considered within the context of play, which is the major activity of childhood and is very important in facilitating development (Vygotsky, 1967). Play is acknowledged as being difficult to define (Pellegrini, 2009). One commonly quoted definition of play is that of Rubin et al. (1983) who took into consideration the perspectives of different disciplines: "The entity 'play' is a behavioural disposition that occurs in describable and reproducible contexts and is manifest in a variety of observable behaviours. The dispositional, behavioural and contextual markers of play, however, all will vary given the particular biases of an investigator" (p.698). Despite the complexity of play, it can still be regarded simplistically, devalued, or considered to be educationally irrelevant and is seldom examined as an outcome (Bundy, 2005; Rubin et al., 1983). This thesis will explore both play and playfulness, as play is the important context through which playfulness is manifest in children.

1.1 Why playfulness?

Playfulness is the major focus of this thesis because of its significant associations with divergent thinking (Barnett & Kleiber, 1982), creativity (Van der Poel, de Bruyn, & Rost, 1991) and coping ability (Hess & Bundy, 2003; Saunders et al., 1999). Playfulness is an important consideration for young children because "without playfulness, all activities become work" (Bundy, 1993, p. 217). There have been varying conceptualisations of playfulness, but Bundy (1997) used the work of Bateson (1971) and Neumann (1971), to discuss what she considered to be the essential elements of playfulness: freedom to suspend reality, internal control, intrinsic motivation, and framing (i.e. the ability to give and read social cues).

Given the important associations between playfulness and attributes such as coping skills and creativity, it is important to understand what might be some of its precursors. Various studies have examined factors that seem to be related to children's playfulness, including parent behaviours, birth order, socioeconomic status, and parent age (Barnett & Kleiber, 1982; Van der Poel et al., 1991). Many of the early studies of potential precursors to playfulness occurred in the 1980s and assessed children's playfulness via parental report using the Children's Playfulness Scale (Barnett, 1990). Consequently, a more current investigation of possible precursors is warranted, particularly using an observational assessment of playfulness rather than one based on parent report. Further, playfulness in children has been examined in different populations in the literature, for example, in children with autism and cerebral palsy (Muys, Rodger, & Bundy, 2006; Okimoto, Bundy, & Hanzlik, 2000). However, little is known about playfulness specifically in South Australian preschool children.

While playfulness has been previously considered to be a relatively stable personality trait (Barnett, 1991a), recent research indicates that playfulness may in fact be malleable and responsive to intervention (Okimoto et al., 2000; Reed, Dunbar, & Bundy, 2000). Promising research that indicates that playfulness is responsive to intervention suggests that playfulness is an attribute that is worthy of consideration as a focus of intervention. Bronson and Bundy (2001) emphasised the role of a supportive environment in facilitating playfulness in children. This is in keeping with transactionalism, a relational theory which assumes the interdependence of a person with his or her environment (Cutchin & Dickie, 2012; Law et al., 1996). While it is obvious that physical environments might support playfulness, the sociocultural environment which comprises rules, accepted norms and expectations, is also influential, as it impacts on whether an individual is able to freely and confidently interact with the environment (Rowles, 1991; Skard & Bundy, 2008). Rules that are too strict or inconsistent tend to reduce play, while prudently deliberated rules tend to promote it (Skard & Bundy, 2008).

The family environment is an important sociocultural environment in which a child spends so much of his or her time, and hence should be examined as a potential influence on playfulness. It seems that factors external to a child impact on playfulness, as varying environmental contexts (such as home or school) have been found to impact on playfulness in children with cerebral palsy (Rigby & Gaik, 2007). Further, Van der Poel et

al. (1991) examined playfulness and parenting, and found a significant association between children's playfulness and an authoritative parenting style (i.e. parenting consisting of firm limit setting coupled with respect for the child's point of view). However, there appears to be a lack of literature about how parenting and other specific aspects of the home environment might influence playfulness. Therefore, this thesis will draw on both the play and playfulness literature in order to explore these relationships.

1.2 Playfulness and the family context

Attachment theory is based on the work of Bowlby (1969), and suggests that a secure attachment to a primary caregiver during infancy lays an important foundation for competent functioning throughout life (Crittenden & Ainsworth, 1989). A secure attachment is considered paramount in fostering consistent and responsive caregiving so that an infant can develop trust that his or her needs will be met (D. Barnett, Ganiban, & Cicchetti, 1999). A secure attachment relationship allows for trust and security that enables exploratory play which in turn results in autonomy and independent play (Seifer & Schiller, 1995). Gordon (2014) is convinced that playfulness is an outcome of a secure attachment, and discusses the importance of the early attachment relationship for nurturing attuned play which in turn is necessary for exploratory play to occur within the second year of life.

Mind mindedness is a concept that has emerged from the attachment theory literature, and is considered important for the development of secure attachment relationships (Meins & Russell, 1997). Mind mindedness is the inclination of a caregiver to treat his or her child as an individual with a mind, rather than simply as a being with needs that must be met (Meins & Russell, 1997). Parents who display mind mindedness in their descriptions of their children are more likely to encourage mentalising abilities in their children (i.e. the ability to understand others' mental orientations to the world) (Lok & McMahon, 2006). Mentalising abilities are important because of the associations found with both empathy and the development of functional relationships with others (Anckarsäter, 2006). Further, parental mentalising abilities have been associated with symbolic play and regulation of affect in young children (Fonagy, Steele, Steele, & Moran, 1991; Meins, Fernyhough, Russell, & Clark-Carter, 1998), both of which seem to be

important for playfulness. Therefore, further investigation into the relationship between children's playfulness and parental mind mindedness is warranted.

Lok and McMahon (2006) found that mind mindedness was related to maternal non-hostility, that is, mothers with higher levels of mind mindedness were less likely to display hostility during interaction with their children. They considered that a mother who views her child as an individual may be less likely to display disrespectful behaviour towards her child. The connection between mind mindedness and non-hostility suggests it would also be valuable to explore children's playfulness in the context of parenting practices within the early family environment. There is a wealth of literature demonstrating the associations between specific parenting practices and developmental outcomes for children, for example, social and cognitive development, and the presence of externalising behaviour problems such as aggression and non-compliance (Gutman & Feinstein, 2010; Magill-Evans & Harrison, 2001; McKee et al., 2008). The role of parenting in developmental outcomes for children, and the important role of the sociocultural environment in nurturing playfulness, suggests that the influence of parenting practices on child playfulness warrants closer examination.

At the extreme end of the parenting spectrum, studies in the area of child abuse and/or neglect have found that parents are often unable to acknowledge a child's positive contributions to the parent-child relationship and may respond inappropriately during play (Bradley & Peters, 1991; Fagan & Dore, 1993). For example, parents may be less open to new experiences, discourage independence, can be critical and intrusive, and display reduced empathy with their children (Lau, Valeri, McCarty, & Weisz, 2006; Trickett & Susman, 1988). Consequently, child abuse and/or neglect has been found to impact on play, for example, symbolic play, play behaviour, and social participation in play (Darwish, Esquivel, Houtz, & Alfonso, 2001; Demoss, 1999; Klein, 1992). However, few studies have investigated the relationship between child abuse and/or neglect and playfulness, with the exception of Cooper (2000a). Cooper found many relationships between child abuse and/or neglect and different aspects of children's play; however, he did not establish a link between child abuse and/or neglect and children's playfulness. He proposed that there was a need for further research examining children's playfulness and child abuse and/or neglect using measures that do not rely on parental report. Given the limited attention that playfulness has received in the child abuse and neglect literature, and the

need for effective interventions which focus on playfulness, it is clearly evident that further research is needed in the area.

Reflecting further on the importance of the child's sociocultural environment for playfulness, adult playfulness in the family environment is also an important consideration. It is often assumed that play is an enjoyable encounter for adults and children; however, the opposite is true in families where play is perceived to be a stressful activity for parents (Fagot & Kavanagh, 1991). Parents in abusing and/or neglectful families have been found to experience less pleasure and display increased negative affect compared to non-abusing parents (Baumrind, 1994). This experience of less enjoyment can make play a difficult co-occupation, which is described as joint participation in highly interactive occupations, that is, "a dance between the occupations of one individual and another that sequentially shapes the occupations of both persons" (Pierce, 2009, p. 203).

Currently, the impact of adult playfulness on children's playfulness would appear to be a gap in the research literature. This is surprising given the benefits of playfulness into adulthood. Playfulness in adults has been associated with academic achievement, life satisfaction, a subjective sense of well-being and a tendency to engage in enjoyable activities (Proyer, 2011, 2012a, 2013). Further, playful people seem to have a different way of perceiving and responding to stress than those who are less playful (Magnuson & Barnett, 2013). Little has been written on playfulness in the parenting role, yet these identified benefits of playfulness demonstrate the value of playfulness in potentially ameliorating stress in the parenting role and increasing life satisfaction. Such benefits may also assist parents in their ability to provide an appropriate sociocultural environment to nurture playfulness in their children. Therefore, relationships between these constructs need to be examined more closely.

1.3 Objectives of the research

This PhD thesis will examine whether there are relationships between children's playfulness and a range of parent characteristics described above, including security of attachment, parenting practices, mind mindedness and parent playfulness. Given the importance of playfulness in children's lives for flexible thinking and ongoing adaptability,

it is also surprising that it has been so seldom addressed in the child abuse and neglect literature. It is clear that the early home environment, including the quality of attachment relationship and parental practices, has a profound impact on a child throughout life.

There have been few Australian studies examining playfulness and its potential precursors in preschool children, particularly with a focus on the child's familial environment. It is essential to consider playfulness in preschool children because they are beginning to assert their independence (Arney, 2004) and their play is becoming increasingly complex in terms of the roles they assume and symbolic use of objects (Bodrova & Leong, 2003). Further, in South Australia, preschool is the year before formal schooling commences, and is consequently very important. Therefore, this PhD project will consist of three studies conducted in two phases. Phase one includes both study 1 and two. Study 1 employs a cross-sectional observational design to examine playfulness in preschool children as well as potential precursors to playfulness. Study 2 examines potential predictors of playfulness in children, namely attachment behaviours, parental mind mindedness, parenting practices and parental playfulness. Phase two consists of only study three, a much smaller study, which qualitatively examines the play profiles of children who have experienced child abuse and/or neglect.

A deeper understanding of the potential precursors of children's playfulness is essential for assisting both therapists and educators in developing appropriate therapeutic programs and educational curricula aimed at nurturing playfulness. Further, a greater understanding of how child abuse and/or neglect may impact on playfulness may also facilitate development of effective therapeutic interventions.

1.4 Structure of the thesis

Chapters 2 through to 6 of this thesis relate to phase one of the research, which comprises studies one and two. A literature review on play and playfulness is presented in Chapter 2 and includes background information such as historical issues in the research of play and the importance of play. Children's playfulness is also explored, particularly in relation to its significance, definition and conceptualisation. The exploration of the

literature in this chapter demonstrates the need to address the first two research aims (and five related hypotheses) of study 1 as shown in Table 1.1.

The literature review continues in Chapter 3, in which potential parent factors such as the early attachment relationship, mind mindedness, parenting practices and parent playfulness are explored. The conceptual model connecting attachment and playfulness is built throughout Chapter 3, and lays the foundation for study 2. The remainder of the research hypotheses (numbers 6 to 10) are developed throughout Chapter 3, as shown in Table 1.1.

The methods for studies 1 and 2 are outlined in Chapter 4. The hypotheses on which each study are based are recapped in Chapter 4, and information is presented about the participants, the instruments, the procedures, ethical issues, and statistical analyses. The results for studies 1 and 2 are presented in Chapter 5. This is followed by discussion of the findings for studies 1 and 2 in Chapter 6 with a major focus on interpretations of the results and methodological issues.

Table 1.1 Structure of the thesis and aims of each study

PHASE 1	**Research aim** **(Chapters 2-6)**
Study 1	To examine levels of playfulness in Australian preschool age children, and To determine whether a range of child and family characteristics are related to preschool children's playfulness in metropolitan Adelaide. Hypotheses 1 to 5 are generated throughout Chapter 2 in relation to the relationships between children's playfulness and – parent age, socioeconomic status, children's age, children's developmental status, and children's gender.
Study 2	To determine to what extent aspects of the family caregiving environment are related to children's playfulness. This aim will therefore test the model presented in Figure 1.1. Hypotheses 6 to 10 are generated throughout Chapter 3 in relation to the relationships between children's playfulness and – attachment behaviour, parent mind mindedness, parenting practices (warmth, reasoning, consistency, and hostility), and parent playfulness.
PHASE 2	**Research aim** **(Chapter 7)**
Study 3	To explore playfulness, mind mindedness, and attachment behaviour of a small group of children who have experienced child abuse and/or neglect.

Chapter 7 will present study 3 in its entirety, including a literature review, method, results and discussion. As shown in Table 1.1, study 3 seeks to examine playfulness in a small group of children who have experienced child abuse and/or neglect. Chapter 8 provides a conclusion to the thesis, drawing together findings from all three studies, and examining the implications for future research, policy and intervention.

CHAPTER 2 - PLAY AND PLAYFULNESS

This chapter includes an exploration of the historical aspects of play research, some of the major play theories, and definitions of play and playfulness. The importance of both play and playfulness will be explored, demonstrating the significance of playfulness in the lives of young children. The conceptualisation of playfulness will also be discussed and ongoing need for research in the area, providing the basis for the first research question.

Play has been discussed in the literature for more than a century (e.g. Spencer, 1872). While there were early pioneers of play research, until the mid-1970s it seemed that scientists tended to avoid studying play because it was such an obvious and common phenomenon, with the assumption being that there was nothing further to discover (Reilly, 1974). There is now much contention in the literature regarding the definition and purpose of play and also how it manifests (Bundy, 2005; Sutton-Smith, 1997). Rubin et al. (1983) drew attention to the dichotomy in the literature: that play was either trivialised or considered irrelevant (Montessori, 1973) or that play was viewed as essential to child development and adjustment (Erikson, 1963; Vygotsky, 1967). Rubin et al. (1983, p. 694) considered play to be worthy of further research because children do in fact play, and it is therefore important to understand how and why they play and whether it serves a role in their development. Bundy (2005, p. 139) supports this idea, claiming play to be "among the most complex of childhood activities".

Additional support for the value of researching play can be found in the prolific amount of play literature that has emerged since the late 1970s, as evidenced by the overview of play provided by Parham (2008). Further, Lyons (1987) described the importance of play for daily living, and hence the need for the occupational therapy profession to focus on play and playfulness. Play is both 'complex and ambiguous' (Eberle, 2014, p. 214). Hence, an overview of play theories will now be presented to illustrate the diversity of the concept prior to presenting the definitions of play which are covered in section 2.2.

2.1 Historical context of play theories

Historically, classical play theories attempted to explain why play occurs (Cooper, 2000a), and predominantly focused on the physical and instinctive aspects of play (Verenikina, Harris, & Lysaght, 2003). For example, the Surplus Energy Theory, developed by von Schiller (cited in Parham, 2008) and expanded on by Spencer (1872) proposed that play developed because of the surplus energy of the young of the species. In contrast, Recreation or Relaxation Theory developed by Lazarus in the nineteenth century (cited in Rubin et al., 1983) suggested that play resulted from an energy deficit and actually had a restorative function. Other classical play theories developed in the late nineteenth and early twentieth century by Groos and Hall (as cited in Parham, 2008) discussed the evolutionary role that play has in developing survival skills. The Preexercise Theory developed by Groos focused on the adaptive role that play has in the evolutionary process, while Hall's Recapitulation Theory focused on children acting out their evolutionary pasts, with play development occurring in an evolutionary sequence (Parham, 2008; Verenikina et al., 2003).

These classical theories provided a foundation for more contemporary theories which emerged during the latter half of the 1900s (Parham, 2008). Many of the original concepts from classical play theories have been built on and superseded by contemporary theorists. For example, Burghardt (2005) further developed the concept of the evolutionary role of play, as discussed in section 2.1.1. Hence, the classical theories made a valuable contribution to the play literature, that of providing the basis for advancing play as a theoretical concept, as well as raising the profile of play (Verenikina et al., 2003). There are numerous contemporary play theories which have subsequently emerged, and these will now be explored, including (1) biological, (2) psychodynamic, (3) cognitive-developmental and (4) sociocultural theories.

2.1.1 Biological theories

Two major biological theories that emerged in the twentieth century include: the Evolutionary Biology of Play and Arousal Modulation. The Evolutionary Biology of Play is based on Burghardt's (2005) study of animal play (including human play) and is informed by his background as both a biologist and psychologist (Burghardt, 2005; Parham, 2008).

Burghardt (2005) proposed a hierarchy of play processes, where primary play occurs as a side-effect of other factors (e.g. excess metabolic energy); secondary play facilitates development or enhancement of capacities such as neural processing, physical fitness and coordination; and tertiary play which facilitates ingenuity and innovations. He also proposed five criteria for what constitutes play across species, and that all five criteria must be met in at least one aspect for the behaviour to be considered play (Burghardt, 2005):

1. Play serves limited function and includes elements that are not essential for survival.

2. Play has an endogenous component, that is, it is voluntary, intrinsically motivated, spontaneous and/or pleasurable.

3. Play is structurally or temporally different from more serious forms of behaviour (e.g. it can be exaggerated, awkward or precocious or may follow a different sequence).

4. Play actions involve repeated performance which may in turn facilitate the use of play to learn or develop skills.

5. Play occurs when the animal is in a relaxed field (i.e. occurs when the animal is fed, healthy and free from external stress or threat such as predators or extreme weather).

Arousal modulation theories are based on the premise that an animal's central nervous system pursues an optimal level of arousal (Rubin et al., 1983). Lyons (1987, p. 154) explained arousal as "the sense of intense physical and/or mental involvement in an activity". Berlyne (1966) maintained that overly high or low levels of stimulation were aversive, and that when in a novel or uncertain environment, organisms will engage in specific exploration to reduce their arousal or anxiety. However, when faced with a tedious and predictable environment, the organism will engage in diverse exploration in order to pursue novel stimuli to relieve boredom (Berlyne 1971, cited in Parham, 2008). Berlyne (1966) considered that this central nervous system need for various levels of stimulation facilitated intrinsically motivated behaviour. In contrast, tissue needs such as

hunger, thirst and sex, were considered to constitute external behaviour motivators. Ellis (1973) extended Berlyne's theory and suggested that diversive exploration was in fact the essence of play. Consequently, Ellis (1973, p. 110) defined play as "behaviour that is motivated by the need to elevate the level of arousal towards the optimal". Both Hutt (1971) and Lieberman (1977) extended the concept of exploration, and made a distinction between play and exploration. They maintained that specific exploration occurs in novel situations but that play occurs in known or familiar environments when the child considers what they themselves can do with a particular object. While this differentiation between play and exploration lacks clarity, it is important to consider that exploration is not always play (Burghardt, 2005; Parham, 2008).

2.1.2 Psychodynamic theories of play

While Freud did not specifically develop a play theory, his view of play was influential in the subsequent development of psychodynamic play theories (Rubin et al., 1983). Erikson (1963) focused on the mastery feature of play raised by Freud and its importance in ego development. He maintained that, through the play experience, children had the opportunity to resolve conflicts, anxieties and uncertainty, develop ego control and coping strategies in order to master reality (Erikson, 1963; Parham, 2008). This important work on the role of play in emotional development, while having limited empirical validation, did contribute to the use of play therapy as developed by Axline (as cited in Parham, 2008) to help children manage emotional difficulties (Parham, 2008; Rubin et al., 1983). Axline (1969) adapted the client-centred psychotherapy principles of Carl Rogers (1951) to develop a non-directive play therapy approach for use with children (Wilson & Ryan, 2005). Consequently, Axline's approach was influenced by both the humanistic approach of Rogers and also incorporated the psychoanalytic ideas of Freud and Erikson: that children could express and resolve their problems through play just as adults might verbally work through their problems (Axline, 1969; Parham, 2008).

2.1.3 Cognitive-developmental theories

Piaget's work in the middle of the twentieth century focused on cognition, and, like Erikson (1963), also incorporated the notion of mastery. He maintained that engaging in activities for the pleasure of mastery is what provides the child with feelings of skilfulness

or power, and that mastery is needed before a child can enjoy an activity for its inherent value (Piaget, 1952). According to Piaget, play does not originate from new problem solving endeavours, but rather involves the pleasurable application of existing cognitive skills. He considered that play is indicative of a child's level of development, and is present when assimilation dominates accommodation. Assimilation is when children incorporate events, scenarios and objects into their existing ways of thinking. Accommodation, on the other hand, is when children modify their actions or way of thinking to fit in with the new situation or experience (Piaget, 1952; Rubin et al., 1983).

Vygotsky's (1967) work is covered largely in the next section on sociocultural theories of play. However, it is worth noting that Vygotsky, in contrast to Piaget, considered that abstract thought could be developed through generating imaginary play situations. Vygotsky suggested that individual cognitive development occurs within the context of the social milieu, that is, social activity helps the child to progress to a higher level of mental functioning (Tudge & Rogoff, 1999). Piaget views the child primarily as a biological being who comes to understand the world through acting on the physical environment as an individual (Tudge & Rogoff).

While Piaget focused on intelligence and its relationship to play, another play theorist, Sutton-Smith (1971) focused more on other aspects of cognition such as the development of creativity and flexibility, and proposed that the safe context of play provided the opportunity to experiment with new ideas and behaviours (Parham, 2008). Unlike Piaget (1952) who considered that play largely involved assimilation, Sutton-Smith (1971) proposed that play involved adaptation. He argued that Piaget's theory amounted to cognitive 'reductionism', and proposed instead that play was not only a cognitive function, but also an expressive one-of-a-kind form which served a unique purpose (Sutton-Smith, 1971). Stagnitti (2009) discussed the internal motivation and voluntary engagement that drives pretend play. Stagnitti (2009) and Sutton-Smith (1967) also highlight that involvement in pretend play transcends reality through the use of fantasy themes, but also reflects reality when children act out events that have occurred in their own lives.

2.1.4 Sociocultural theories of play

Vygotsky (1967) considered play to be not only the main activity of childhood, but also the foremost facilitator of development during the preschool years. He argued that play could not be defined just on the basis of the seeking of pleasure, primarily because pleasure could be sought in other ways such as sucking a pacifier, but also because, when a play outcome is not to a child's advantage, then the child can experience an acute sense of displeasure.

Vygotsky (1967) disagreed with the intellectualisation of play, emphasising the importance of considering play from the viewpoint of meeting the child's needs, motivations and affective ambitions. Consequently, child development was seen as more than just intellectual development, but rather developmental milestones were strongly connected with changes in incentives for the child to act. While very young children tend to need to have their needs met immediately (or a tantrum will ensue), preschool age children can begin to deal with unsatisfied desires through imaginative play. Preschool children can also integrate meaning and ideas that are at odds with what they see before them, therefore they are able to act on their ideas rather than objects, and can use objects for other purposes (e.g. a stick might be used as a horse). Vygotsky (1967) warned against viewing play just as a cognitive process which tends to neglect both the affective state as well as the context of the play. Vygotsky also considered imaginary play and rules to be inextricably linked, as societal conventions strongly influence imaginative play, for example a child playing a maternal role is influenced by societal rules of maternal behaviour. Vygotsky was also influenced by Piaget's work in which rules were differentiated as being either one-sided (i.e. dictated by adults) or rules that arise from collaboration between children and others. These collaborative rules then help the child delay acting according to their immediate impulse, but instead they learn to wait and comply with the expectations of the game, realising there is much greater pleasure to be gained from the game rather than acting on an impulse (e.g. a child who is crying in their role as a patient whilst at the same time enjoying themselves as a player).

Bateson (1971) was also interested in the cultural context of play, and addressed the accepted idea of the time, that play was viewed as important for learning role behaviour. However, Bateson considered that play was much more than this: he maintained the

importance of children learning that there is in fact "such a thing as a role" (1971, p.264). Consequently, Bateson (1971) did not focus per se on whether children could assume, for example, a mother role or some other sort of role. He argued that it was far more important that children were able to understand and learn the flexible style of behaviour needed in relation to the context, that is, "the choice of style or role is related to the [play] frame" (1971, p. 265). So, the context or frame then determines the style of action required. This is made possible because of the culture of the joint understanding between the players as to how they will communicate, that is, their shared culture.

2.2 What is play?

Almost all theoretical analyses of play include attempts to define play. Rubin et al., (1983) proposed that this need to define play emanated in response to literature which suggested that the concept of play should be discarded, and from our cultural uneasiness with the phenomenon of play which perhaps grew out of the Puritan ethic which saw play as the opposite of work and therefore unworthy of scientific study. Eberle (2014) highlights the ambiguity of play by explaining that the word 'play' can be an adjective, noun or verb that can describe "actions, the lack of action, and attitudes" (p. 217). While it is often assumed that play is instantly easy to identify, Burghardt (2005) accentuates the value of time spent defining play because it sometimes is not easy to recognise at all. Sturgess (2009) also suggests that it may not always be apparent when a child is truly engaged in play, but the "child knows when he or she is playing" (Sturgess, 2009, p. 20). Burghardt (2005, p.47) drew attention to the various unhelpful attempts to define play through suggestions such as "play is what play researchers study" as proposed by Power (2000).

Rubin et al. (1983) discussed three approaches to defining play: that play is defined as a disposition, that play is categorised according to observable behaviours, or that play is defined in relation to the context which is likely to facilitate play behaviour. Rubin et al. (1983) highlighted that, although there were difficulties in defining play, it was a shared notion that "the entity 'play' is a behavioural disposition that occurs in describable and reproducible contexts and is manifest in a variety of observable behaviours" (p. 698).

There have been suggestions in the literature that any explanation or definition of play should incorporate an interdisciplinary perspective as well as adequately capturing the complex dimensions and the multifaceted nature of the phenomenon (Bundy, 2005; Reilly, 1974). Therefore, a limited number of definitions will be discussed here which capture the complex and multifaceted nature of play. Bundy (2005) proposes that any assessment of a child's play should consider more than just the child's capacity to play, but also what a child does, how they approach play, why they are enjoying it and the context of the environment in which it is being undertaken.

Burghardt (2005, p.49) emphasised that scientific definitions should not necessarily capture one set truth, but rather have a role in helping to develop a more comprehensive understanding of the "natural world". While Burghardt acknowledged that play definitions should not be so vague that the concept under study is unclear, he also warned against using definitions that are too rigid as they may in fact inhibit further study of play in much the same way that the operant conditioning literature dominated writing about cognition in psychology and hindered development of alternative naturalistic learning phenomena and behavioural plasticity research. Burghardt (2005, p.82) incorporated all of his five criteria as described above into the following definition: "Play is repeated, incompletely functional behaviour differing from more serious versions structurally, contextually, or ontogenetically, and initiated voluntarily when the animal is in a relaxed or low-stress setting". Such a definition demonstrates the importance of a safe and low-stress environment in order to facilitate play, considerations which will be explored further in Chapter 3.

Eberle (2014) concurs with Burghardt's (2005) view that play is purposeless, voluntary and fun and also that play is evolution based. Eberle defined play as "an ancient, voluntary, 'emergent' process driven by pleasure that yet strengthens our muscles, instructs our social skills, tempers and deepens our positive emotions, and enables a state of balance that leaves us poised to play some more" (Eberle, 2014, p. 231). Eberle (2014, p. 222) suggested that play can often look very different, but that it must contain six elements in order to be defined as play: "anticipation, surprise, pleasure, understanding, strength and poise". Anticipation marks the beginning of play, as the player experiences the enjoyable tension of expectation in looking forward to play. Anticipation succumbs to surprise in which the player experiences awakening and excitement, and is able to keep

play fresh. Pleasure involves gratification, joy, fun and delight, and it is this aspect that perpetuates play because of the intrinsic reward. Understanding is an important element of play because mutuality and sensitivity are so important in playing with others. Strength involves mastery and control, and includes both physical prowess as well as strength of mind such as resilience, ingenuity, creativity and wit. Poise is experienced by the player as composure, fulfilment, contentment and balance, with the importance of experiencing physical balance but also balance in intellectual, emotional and social ways.

Play is considered to be both a means and an end (Parham, 2008). That is, while it serves as a vehicle to facilitate creativity and developmental areas such as motor, cognitive, social, language, sensory, self-care, psychosocial and work skills (Parham, 2008; Rubin et al., 1983), it is also a valuable end in itself because it gives the child meaning and helps to form a sense of identity (Parham & Primeau, 1997). There is potential debate as to whether true play is actually occurring when used as a means to facilitate therapeutic goals, as many authors would argue that true play is not occurring for the child when he or she is not in control of the play situation (Neumann, 1971; Skard & Bundy, 2008). Bishop and Chace (1971, p.322) describe restrictive environmental conditions that might prevent or stifle playfulness, such as environments with high levels of control or 'oughtness' imposed by others that might prevent spontaneity and exploration. However potentially, if a child responds positively to an adult's lead, there may be a time in the interaction when the child is actually playing (i.e. engaging in play that is internally controlled and intrinsically motivated). Hence, as they take the play sequence on as their own, so the play episode transitions into child-directed play.

Sturgess (2009, p.20) tends to support this idea of child-directed play, defining play as "activities that are chosen by the child, that are identified by the child as play and the child engages in them playfully". Drawing on the work of a number of authors (Barnett, 1991a; Rigby & Rodger, 2006; Stagnitti & Unsworth, 2000), Sturgess, (2009, p.20) outlined a number of descriptive characteristics of play, of which some or all might be present in a play episode, namely: "spontaneous, non-literal, pleasurable, flexible, means-oriented, intrinsically motivated, meaningful, active and rule-governed".

Play is both the outward display of development as well as a process of adaptation (Reilly, 1974), for example, pretend play ability is considered to be a viable indicator of social

competence (Howes & Matheson, 1992; Swindells & Stagnitti, 2006). Stagnitti (2009) asserted that there is little doubt that true play is occurring when a child is engaged in creative play. Play is an essential part of childhood because of its vital role in learning, and particularly in helping to facilitate learning throughout the lifespan (Reiber, Smith, & Noah, 1998; Singer, Golinkoff, & Hirsh-Pasek, 2006). The complex learning process of play is motivated by curiosity which in turn facilitates practice and mastery (Reilly, 1974). This pleasure of mastery, as discussed above, enables the child to feel skilful or powerful (Piaget, 1952).

Neumann (1971) suggested that during play, a child engages in a relationship or transaction with the environment which involves initiation, enaction and completion. She also considered that three criteria needed to be met in order to determine whether a child was in fact playing. These include: internal reality (or the ability to suspend reality); intrinsic motivation (the player is motivated from within to engage in the activity); and internal locus of control (that is the player determines the direction of the play and this can also involve shared decisions with peers or an adult).

The differing viewpoints discussed in this chapter demonstrate the complexity of the concept of play. Despite the longevity of play as a concept in the research literature, a specific definition of play that clearly outlines its boundaries has been somewhat elusive (Parham, 2008). Pellegrini and Smith (1998) emphasise the complexity of play, recognising the insufficiency of subscribing to just one definition of play. Despite the lack of consensus about what constitutes play, the importance of play has been extensively recognised (Bundy, 1997; Cooper, 2000a; Parham, 2008).

2.3 Why is play important?

Play has an essential role in skill development, “serves multiple functions, and is indispensable to the development of a healthy, well-functioning adult” (LaFreniere, 2013, p.188). Play is an important aspect of acculturation, and there is “no more important way in which children spend their time” (Bundy, 2005, p.129). Play is extremely important in facilitating healthy childhood development and well being because it contributes to cognitive, physical, social and emotional growth (Ginsburg, 2007). Further, play is vital in fostering abstract thinking, cognition, numeracy and the ability to see perspective (Bane,

2008; Emfinger, 2009), and has an implicit role in motivating learning (Myck-Wayne, 2010; Reiber et al., 1998). In fact, high quality play experiences are considered essential in developing abilities such as metacognition, social cognition, science, mathematics and literacy (Bergen, 2002).

Whitebread, Coltman, Jameson and Lander (2009) reported on three of their studies which demonstrate the value of play (particularly pretence or symbolic play) for metacognition and self-regulation. Metacognition is "the monitoring and control of thought" and includes higher order cognitive skills such as problem solving, critical thinking and awareness of one's own thinking and knowledge (Martinez, 2006, p. 696). Martinez maintains that metacognition and self-regulation are intrinsically linked because metacognition comes into play in demanding situations, and thus requires the ability to manage emotions in the face of difficulties and a risk of failure. Whitebread et al. (2009) highlighted the importance of child-initiated playful activities in developing the ability to self-regulate, which is an important skill for effortful learning and thus supports problem-solving or creative activities.

Play has a role in helping children to cope with stress and build resilience (Berger & Lahad, 2010), and is a means by which children can express themes related to their psychosocial or developmental struggles including conflict and negative emotions such as hostility (Green, Crenshaw, & Langtiw, 2009). Play has been associated with positive coping skills and flexible thought processes (Russ, 2005). Children develop the ability to self-regulate and can learn about themselves and their world through play as it provides an ideal opportunity to take risks and problem solve because the negative consequences of risk taking are diminished (Bundy et al., 2009; Russ, 2005). Play is an important part of a healthy lifestyle and results in a sense of autonomy and well-being as it facilitates in children the ability to act which in turn promotes a sense of pleasure (Ferland, 1997; Parham, 2008).

Play forms an important vehicle by which children can develop their social skills and awareness, experiment with social roles and learn the accepted norms of behaviour (Cordier, Bundy, Hocking, & Einfeld, 2009). Children who are socially non-interactive are considered to potentially be at risk for later adjustment difficulties (Coplan & Rubin, 1998; Lagacé-Séguin & d'Entremont, 2006). On the other hand, competent pretend play skills

have been linked with greater levels of prosocial behaviour, ability to understand emotions, and decreased aggressive and withdrawn behaviour (Howes & Matheson, 1992; Swindells & Stagnitti, 2006). Swindells and Stagnitti (2006) found that children who were extremely competent at pretend play displayed well developed capacity in interpersonal relationships. This study also found that children with less elaborate pretend play skills seemed to be better at sharing and cooperative play. While this seemed surprising, they proposed that children with less developed pretend play skills were possibly more passive and unable to initiate play, so they therefore required more direction from other children. There is also a growing body of evidence that suggests that the quality of pretend play skills and experiences are important. For example, high quality pretend play skills have been found to be important in facilitating abstract thinking, perspective taking and literacy, and the elaborate narratives that develop as part of pretend play would seem to be a key element in this link with literacy (Bergen, 2002).

The importance attributed to pretend play has grown in the literature, with Stagnitti (2009) asserting the uniqueness of pretend play and the lack of dispute that pretend play is in fact play. The ability of the child to decentre in pretend play, or to direct actions away from the self and onto something else, is considered to be important in facilitating the capacity to understand the perspectives and mental states of others (Baron-Cohen, 1996; Stagnitti, 2009). Russ (2005) highlights the importance of taking the perspectives of others in play in relation to empathy and social functioning. Pretend play has also been implicated as important for the development of language, literacy, narrative competence, social competence, emotional growth, creativity, self-regulation and problem-solving (Stagnitti, 2009; Swindells & Stagnitti, 2006; Uren & Stagnitti, 2009).

2.4 How does play develop?

The type and extent of play in which a child is involved is thought to be influenced by a number of factors, including how much time there is for playing, socioeconomic aspects, as well as the availability of space and play materials (Sturgess, 2009). In order for children to develop play skills, as Burghardt (2005) indicates, they need to be in a relaxed field. In other words, play needs to occur in a context where children feel safe enough to

play (Skard & Bundy, 2008). However, although these aspects are important in terms of opportunity and encouraging contexts for play to occur, some authors have also highlighted children's natural aptitude for playfulness, which helps them to create play in non-play situations such as work and learning (Bazyk, Stalnaker, Llerena, Ekelman, & Bazyk, 2003; Sanders & Graham, 1995).

As shown in the previous discussion of different play theories, how play develops has been debated in the literature, and depends on the particular orientation of the author's discipline. For example, Piaget's (1952) major focus is on the child constructing his or her own knowledge, and argues that a child cannot progress to the next level of play until mastery of the previous level is attained. So, repetition and practice are needed to facilitate mastery. On the other hand, Vygotsky (1967) emphasizes the importance of the cultural context. He maintains that cognitive development is collaborative, and so the cultural and social context are important in facilitating the development of play, rather than the child's own construction of knowledge as suggested by Piaget. An alternative view is that of Berlyne (1966) who suggested that play developed out of a desire to reduce arousal or anxiety in a novel environment.

White (1959) emphasised the vital role that motivation has on a child's engagement in play, and particularly effectance motivation or desire for competence. Drawing on the work of Piaget (1952), White (1959) emphasised the transactional nature of play development, which involves stimulation, the child's skills (especially cognition), the effect of the child's active efforts on the environment, and the deeply satisfied sense of efficacy, which in turn continues to motivate investigation. As such, the child's development of skills or effectance motivation should not be considered in isolation, but rather within the context of the transactions. Or it may be that, as Lester and Russell (2010) suggest, play continues to develop within supportive environments in order to foster adaptation and resilience: that is, the child develops a range of adaptive skills and strategies that enables him or her to be resilient and manage everyday life. This idea of play developing as a means of nurturing adaptation and resilience is consistent with the playfulness literature, especially with its links to flexible thinking and coping skills (Hess & Bundy, 2003; Lieberman, 1965).

2.5 Playfulness

In the occupational therapy literature, O'Brien et al. (2000) observed the tendency to traditionally only examine *what* a child actually does, for example their developmental play skills, rather than *how* the child engages in the play activity. Parham (2008) also highlighted the need for research to go beyond examining isolated skills such as social or motor play, to focus on a child's engagement in play by examining play in its natural context.

Playfulness is defined as a child's disposition to play (Barnett, 1991a), or their play style, that is, how a child engages in play or other activities (Bundy, 1997). Playfulness is just as important as what a child does in play, particularly because there is an association between playfulness and coping skills (Saunders et al., 1999; Skard & Bundy, 2008). Barnett (1990) also expressed a preference for focusing on play as a characteristic rather than a behaviour of a child. She argued that highly playful children could create their "own play world out of even the most sterile environment" (p. 320). This focus on playfulness is consistent with Rubin et al.'s (1983) concept of play as disposition which involves behaviour that: is intrinsically motivated; has a focus on the process rather than product; is play and not exploration; involves nonliterality; has no constraints of external rules; and involves active engagement.

Cooper (2000b) conceptualised children's play by dividing it into developmental play capacities (cognitive, physical and social play skills) and individual play styles similar to that outlined by Neumann (1971) (internal control, freedom to suspend reality and intrinsic motivation). He also incorporated the play environment and the cultural and family milieu into his conceptual model. The three aspects included in play style (i.e. internal control, freedom to suspend reality and intrinsic motivation) make up three out of four components of what Bundy and colleagues (Harkness & Bundy, 2001; Morrison, Bundy, & Fisher, 1991) describe as playfulness.

Playfulness has been considered to be a relatively stable personality trait that shows continuity throughout different ages of life (Barnett, 1991a; Lieberman, 1967), with research suggesting that playfulness would seem to be stable over time in children with no known deficits (O'Brien et al., 2000). However, there has also been recent research

that indicates that levels of playfulness in children vary according to the setting (Rigby & Gaik, 2007), providing support for the idea that playfulness is in fact a behaviour influenced by external factors in a child-play-environment transaction (Bronson & Bundy, 2001; Rigby & Gaik, 2007). Further, playfulness may in fact be pliable to change and has been shown to be responsive to interventions such as mother-child intervention, community playgroups and inclusive preschool curriculum (Fabrizi, 2014; Okimoto et al., 2000; Reed et al., 2000). Guitard, Ferland, and Dutil (2005, p. 9) considered play to be "much more than an activity; it is a particular way of thinking about and of approaching activities". Dewey (1910) considered play to be the external demonstration of playfulness which is an internal attitude of the mind or a way of thinking. Dewey (1910) highlighted that a playful attitude provides freedom, because the meaning of what an object represents is far more important than the physical properties of an object to the person using it.

Gordon (2014) effectively contrasts both sides of the argument, drawing attention to the research that is intent on testing the stability of playfulness as a personal trait over a period of time (Yager, Kappelman, Maples, & Pyrbutok, 1997). However, Gordon (2014) critiques these approaches, maintaining that the benefits of playfulness would only then be available to those born with it, and that the approach reinforces the futility of therapy aimed at facilitating or restoring playfulness. Gordon (2014, p. 250) further suggests that playfulness might be the "normal result of healthy development and not a stroke of temperamental good fortune". A genetic disposition may well then interact with life experience in the early years of life to nurture playfulness, experiences may be used to cultivate or restore playfulness throughout life (Gordon, 2014). Therefore, it might well be useful to consider playfulness as a disposition to play as described by Barnett (1991b) which is, however, still malleable, particularly in the early years of life. The changeable nature of playfulness would seem to be supported by studies such as those by Okimoto et al. (2000) and Reed et al. (2000) which provide some encouraging signs that playfulness may in fact be responsive to intervention.

2.6 Correlates and precursors to playfulness

Various studies have examined factors that seem to be precursors to or impact on children's playfulness, including parental attitudes and behaviours (Barnett & Kleiber, 1984; Van der Poel et al., 1991), birth order, socioeconomic status, gender and cognitive ability of child, age of parents (Barnett & Kleiber, 1982), and attendance at child care (Barnett, 1991b). With regard to parenting behaviours, Van der Poel et al. (1991) found that more playful children had parents who had attitudes and behaviours that were consistent with authoritative parenting, that is, they set limits for their child yet also provided opportunities and supported their child to engage in play behaviours. However, it should be noted that playfulness was not assessed using a formalised assessment, but rather by observing the child playing with a novel object. Barnett and Kleiber (1984) hypothesised that children's playfulness would be linked to a permissive parenting style, primarily because of previous findings that associated children's creativity with conceptually flexible mothers (Bishop & Chace, 1971). This hypothesis, however, was generally not supported, although boys with permissive parents did tend to have a higher level of social spontaneity.

In a study using Lieberman's Playfulness Scale (Lieberman, 1977), Barnett and Kleiber (1984) found that male children from large families were more playful than those from smaller families, and also tended to be more playful when they were later in the birth order of the family, rather than only children or first born. Zachopoulou, Trevlas, and Tsikriki (2004) also found a gender difference, with boys having significantly higher playfulness scores than girls on three components of the Children's Playfulness Scale (Barnett, 1990). In her study of 93 kindergarten children with a mean age of 5 years 6 months, Lieberman (1965) found that both chronological age and mental age were correlates of playfulness, providing support for the idea that playfulness is related to developmental level. Barnett and Kleiber (1984) found that playfulness in girls was associated with high socioeconomic status and also with having younger rather than older mothers. A recent study using the Children's Playfulness Scale (Barnett, 1990) found a positive relationship between children's playfulness and birth order, and negative relationships between playfulness and both number of family members and family type (Rentzou, 2013). However, family type was not specified in the study, so it is unclear as to what the term is referring.

There is also some evidence to suggest that disability impacts negatively on levels of playfulness in children. For example, Mortenson and Harris (2006) found that levels of playfulness were significantly lower in children with traumatic brain injury compared to children without disability, and considered that this was consistent with traumatic brain injury having a negative impact on playfulness. Children with disabilities such as cerebral palsy and autism have also been found to have reduced playfulness when compared with typically developing children (Muys et al., 2006; Okimoto et al., 2000). Further, children with prenatal alcohol exposure have been reported to have lower mean playfulness scores than children in a comparison group (Pearton, Ramugondo, Cloete, & Cordier, 2014). Children with prenatal alcohol exposure scored more poorly than comparison group children on several playfulness items, including both the skill and intensity of social play, both the extent and skill with which the children clowned or joked with others, as well as the children's ability to initiate social play (Pearton et al., 2014).

Research has also found that children with attention deficit hyperactivity disorder (ADHD) are less playful than those without ADHD (Cordier, Bundy, Hocking, & Einfeld, 2010a; Cordier, Bundy, Hocking, & Einfeld, 2010b; Leipold & Bundy, 2000). Further, Cordier et al. (2010b) found that children with ADHD tended to present with a specific playfulness profile, with difficulties observed in aspects of playfulness, including sharing, supporting the play of others, intensity of social play, skill of social play, and skill in responding to the cues of others. Cordier et al. (2010b) proposed that the difficulties experienced by children with ADHD in these particular social aspects are consistent with difficulties in being able to consider the viewpoints of others and in becoming more decentred (less absorbed with their own viewpoint). Consequently, it was also of interest that Cordier et al. (2010b) found that children with ADHD actually performed significantly better than their typically developing peers in their ability to negotiate, which they suggested is consistent with being self-absorbed and focusing on ensuring that their own play needs are met.

As shown above, playfulness continues to be examined regularly in relation to children with various disabilities and/or conditions. However, it is of note that many of the studies of potential correlates of playfulness were conducted more than 30 years ago (e.g. Barnett & Kleiber, 1982, 1984), and many studies in the area have measured playfulness using the Children's Playfulness Scale (Barnett, 1990) which relies on parental report.

Parent reports of their children's characteristics (e.g. temperament) have been found to differ from that of observers (Arney, 2004). Further, Cooper (2000a) suggested that a limitation of his study was the use of the Children's Playfulness Scale because of a potential lack of reliability as a result of the reliance on parent report. Consequently, it is important to address this gap in the literature by examining potential precursors to playfulness using an observational instrument that does not rely on parent report alone. There is also a need for current studies that investigate potential relationships between children's playfulness and family characteristics, especially given the current societal pressures which may be influencing children's time spent in free play, for example, an increase in households in which both parents work, a decrease in multigenerational families, and an increase in the use of passive entertainment such as television and electronic games (Ginsburg, 2007).

2.7 The significance of playfulness

Playfulness has been shown to be an important attribute for children because of its association with divergent thinking (Barnett & Kleiber, 1982; Lieberman, 1965). Lieberman (1965) expanded on this link by describing the specific types of thinking that have been linked with playfulness, including fluency of ideas, spontaneous flexibility and originality. It has also been suggested that playfulness seems to promote creativity and verbal intelligence in preschool children (Bergen, 2009; Myck-Wayne, 2010). Further studies have associated playfulness with creativity (Lieberman, 1977; Van der Poel et al., 1991) and coping ability (Hess & Bundy, 2003; Magnuson & Barnett, 2013; Saunders et al., 1999). In a study of preschool children, Saunders et al. (1999) found that playfulness and coping skills were positively correlated. They also noticed some trends that did not reach significance; girls scored higher than boys in both playfulness and coping skills, and older children from 47 to 57 months of age had higher playfulness scores yet lower coping skill scores, than did younger children of 36 to 47 months of age.

While the relationship between playfulness and coping skills has not been extensively examined, a recent study seems to support such an association in preschool children, even though it was a small pilot study (Ruckser-Scherb, 2010). Bundy (1993) theorised that playfulness and coping ability were associated because individuals are more likely to

be better at problem-solving if their approach is flexible and playful, rather than being set on finding one correct answer. She also suggested that playfulness was in fact a child's approach to any activity, and that, "without playfulness, all activities become work" (p. 217). Ruckser-Scherb (2010) suggested that playfulness then was essential for therapeutic practice in improving coping skills and assisting children's adaptation to everyday life.

There is some evidence to suggest that children who have high levels of playfulness have more positive affect, emotional expression and emotion regulation (Barnett, 1991a; Elias & Berk, 2002; Fisher, 1992), aspects that are important for social and emotional development. Further, both pretend play and divergent thinking have been found to be associated with emotion regulation (Hoffmann & Russ, 2012). Hoffmann and Russ (2012) found that children who were better able to regulate their emotions displayed greater imagination and organisational skills and had a greater capacity to engage in the play activity than did those who had less control over their emotions. The association between playfulness and coping skills, positive affect and emotion regulation suggests that playfulness may well be the key for fostering adaptability in children who have experienced such adversity as child abuse and/or neglect.

2.8 Children's playfulness: Conceptualisations and measurement

There have been varying conceptualisations of playfulness, and Lieberman (1965) was one of the first authors to investigate playfulness in young children. She considered the five factors of playfulness to include: physical spontaneity, social spontaneity, cognitive spontaneity, manifest joy, and sense of humour. Building on the work of Dewey (1910) and Erikson (1963), Lieberman (1967) emphasised the role of repetitive activity in facilitating manifest joy, and also discussed the importance of considering both the frequency and intensity of the behaviour when observing playfulness.

Based on her own work as well as the work of others (e.g. White, 1959), Lieberman, (1966) suggested that playfulness warranted being considered an operational concept, with support provided by motivational concepts in the literature such as exploratory behaviour, variation seeking or seeking of novel experiences, motivational competence

which is described as motivation based on successful interaction with the environment, and coping. This notion of motivation being linked with exploration and novelty appears, however, to be somewhat contradictory to Piaget's (1952) view that competence is required before a child can joyfully engage in activities. While White (1959) concurred with Piaget, emphasising the importance of competence or 'effectance motivation', he also explained the role of playful and exploratory activities in learning, and suggested that not all facilitators of learning need to be strong drives such as hunger and fear. A more moderate and yet persistent force such as effectance motivation can result in an exploratory mindset which in turn can facilitate competent interactions with the environment (White, 1959). Lyons (1987) also considered effectance that is, having a sense of competence and control, to be an important aspect of playfulness.

The confusion that emerges in the literature is that some authors may refer to play when in fact they seem to be elements of playfulness. This was particularly the case in earlier writings about play, for example, as discussed earlier in this chapter, Rubin et al.'s (1983) description of play as disposition. Further, the three major elements of play as defined by Neumann (1971) now form a substantial part of what Bundy (1997) considers to be playfulness: freedom to suspend reality, internal control and intrinsic motivation.

Guitard et al. (2005) explored the terms used to describe the components of playfulness in the literature. Table 2.1 expands their work to include later literature, but has also been adapted, with any adult studies deleted. As shown in Table 2.1, there is variable terminology used to describe the different components of playfulness, and it is important to note that the construct has been considered in varying contexts by different authors. For example, some authors have developed measurement instruments, and have consequently examined the construct comprehensively (Barnett, 1991a; Ferland, 1997; Lieberman, 1977; Skard & Bundy, 2008). Others have examined the construct on the basis of the literature in a different context. For example, Bishop and Chace (1971) predominantly explored the role that parents have in creating playful environments, but their conceptualisation was based on the writings of others at the time, and considered that playfulness included spontaneity, exploration, freedom and joy. Therefore, their study focused more on the impact of a playful environment on creative potential rather than on the construct of playfulness in children.

Table 2.1 Components of playfulness as described in the children's playfulness literature, adapted from (Guitard et al., 2005, p.11)

Components of playfulness	Components of playfulness according to different authors									
	Henriot (Cited in Guitard et al., 2005)	Bishop & Chase (1971)	Lieberman (1977) Barnett (1991a)	Ferland (1997)	Bundy (2004)	Knox (1996)	Singer & Rummo (1973)	Singer & colleagues (1978, 80)	Catell (1979)	Lautamo, Kottorp & Salminen (2005)
Curiosity	Uncertainty	Exploration		Curiosity		Curiosity	Curiosity/ novelty seeking			Curiosity Exploration
Imagination	Illusion		Cognitive spontaneity (unconventional objects, roles)		Freedom to suspend reality (pretence, creativity)	Imagination/ creativity	Imaginativeness	Imaginative play		
Control				Initiative/ challenge	Internal control Framing					
Physical activity			Physical spontaneity			Physical activity		Physical activity		
Sense of humour			Sense of humour	Sense of humour	Freedom to suspend reality (clowns, mischief)		Humorous, playful attitude			Sense of humour
Pleasure	Mimic - attributable to joy and pleasure	Joy	Joy	Pleasure	Intrinsic motivation (includes affect)	Joy	Emotional expressiveness		Surgency, siza-affectia	
Spontaneity	Unpredict-ability	Liberty	Social spontaneity	Spontaneity	Freedom to suspend reality, shared control (shares, initiates, supports, enters)	Social and verbal flexibility	Openness	High degree of social play		Spontaneity

Barnett (1990) was impressed by Lieberman's conceptualisation of playfulness and replicated her study in order to develop a more reliable and valid instrument, as Lieberman's playfulness instrument had been critiqued for only having 10 items (Trevlas, Grammatikopoulous, Tsigilis, & Zachopoulou, 2003). Lautamo, Kottorp, and Salminen (2005) developed the Play Assessment for Group Settings (PAGS) which was designed to measure the play performance of children in a natural social context, by considering a child's playful attitude and ability to create and engage in play stories. They describe a playful attitude as expressing emotion, and demonstrating curiosity, exploration, spontaneity and a sense of humour, and this has similarities to the elements of playfulness as discussed by Ferland (1997), including curiosity, sense of humour and spontaneity.

Cattell (1979) discussed components such as surgency (which encapsulates attributes such as cheerfulness, joyousness, humour, wit and energy). He also described siza-affectia which describes a child as being good natured and laughing readily. Bundy (2004) described internal control (e.g. interacts with objects, decides what to do and how to do it, sharing, negotiating) and framing (i.e. giving and receiving cues), and these seem closely aligned with effectance, an element described by Lyons (1987) as the need for a person to have a sense of competence and control over objects, events or others. Lyons' conceptualisation of playfulness has been developed in relation to people with intellectual disabilities, and presumably adults, although this is not explicit. In a grounded theory study of playfulness in preschool children, Knox (1996) observed the following characteristics in playful children: curiosity, imagination, joy, physical activity, and social and verbal flexibility. Knox (1996) also commented that playful children seemed to take charge of play scenarios, regardless of whether they had been instigated by themselves or a playmate.

While there are different terms used in the playfulness literature, there is some agreement in the literature that pleasure, spontaneity and sense of humour are important aspects of playfulness (Bundy, 2004; Ferland, 1997; Lieberman, 1977). Curiosity is considered important by Ferland (1997) and Knox (1996), with creativity also considered essential by Knox (1996) (i.e. imagination and creativity), Lieberman (1977) (i.e. cognitive spontaneity), and Bundy (2004) (i.e. freedom to suspend reality). Additional aspects of playfulness considered by Lyons (1987) included arousal (the

excitement, challenge and involvement in the activity) which seems to relate to the engagement and affect aspects of Bundy's intrinsic motivation; release (catharsis, relaxation and sense of relief from the demands of life) and social interaction (the co-operative and companionship aspects of play) which seems related to Bundy's shared aspects of control, which includes social play.

While there have been a number of authors who have attempted to conceptualise childhood playfulness, the conceptualisations of two prominent authors who have developed the two major assessments in this field are worth further exploration. Barnett's (1990) work is based on the original conceptualisation of playfulness by Lieberman (1977), while Bundy (2004) based her construction of playfulness on the work of Neumann (1971) and Bateson (1971). The Children's Playfulness Scale (CPS) (Barnett, 1990) drew upon literature in psychology, and Bundy, Nelson, Metzger, and Bingaman (2001) maintain that their conceptualisation involved developing items that reflected domains in which playfulness was manifest. The development of the Test of Playfulness (ToP) (Skard & Bundy, 2008) was based largely on educational research and Bundy et al. (2001) suggest that their conceptualisation of playfulness includes aspects that contribute to playfulness. Consequently, the conceptualisation of playfulness in both instruments is slightly different (Muys et al., 2006). Barnett concurs with Lieberman that playfulness consists of five factors, as discussed above. In contrast, Bundy maintains that playfulness is one construct which is not broken down into separate factors, although she does include four key elements in her conceptualisation in order to help understanding of the construct.

Bundy (1997), based on the original work of Neumann (1971) and Bateson (1971), considered the essential ingredients of playfulness to be: freedom to suspend reality (engagement in pretend play, imaginative play), internal control (the degree to which the child perceives they are in control of their own actions), intrinsic motivation (inner drive), and framing (the ability to give and read social cues – messages indicating intent to play). A major difference between the work of Bundy and Barnett is the removal of the physical spontaneity component, mainly because Bundy et al. (2001) maintain that physical spontaneity largely includes aspects of physical development and relies on the child being mobile, so is therefore not a true indicator of playfulness. Ferland (1997) supports Bundy's view that physical spontaneity is not a component of playfulness, as children with

physical disabilities can be playful, even with limited or no mobility. Lieberman and Barnett's remaining four factors are listed below with a commentary about how aspects of Bundy's (2004) playfulness model relates to each component.

1. Cognitive Spontaneity – many aspects of this component are included in Bundy's freedom to suspend reality, including pretend play and the unconventional use of objects. Interestingly, Barnett's item which focuses on staying engaged with an activity rather than changing is negatively scored, while Bundy considers level of engagement in an activity to be an important part of playfulness, but also focuses on the importance of skilful transitions between activities (rather than aimless wandering) if a child does change.

2. Social Spontaneity – Bundy divides control into control of self as well as shared control. Many aspects of shared control (such as sharing, initiating, entering and supporting the play of others) have a great deal in common with Barnett's conceptualisation of social spontaneity which includes cooperative play, sharing and initiating.

3. Manifest Joy – Barnett's focus is on exuberance and enthusiasm, while Skard and Bundy include aspects such as demonstrating positive affect during play as well as engaging in activities for sheer pleasure or for the process (aspects of intrinsic motivation in Bundy's model).

4. Sense of Humour – Barnett focuses on joking, teasing, clowning around and laughing at funny stories. Bundy includes items around clowning, joking, and mischief and teasing in freedom to suspend reality.

In addition to these components of Barnett's, Bundy also includes framing, which sets the whole context of the play situation and involves the ability to both give and respond to cues.

The ToP (Bundy, 2004) has been rigorously tested with a wide range of disability groups and typically developing children (Chiarello, Huntington, & Bundy, 2006; Mortenson & Harris, 2006; Muys et al., 2006; O'Brien & Shirley, 2001; Skaines, Rodger, & Bundy, 2006). Further, it has been found to be a valid and reliable measure of children's playfulness

(Brentnall, Bundy, & Scott Kay, 2008; Bronson & Bundy, 2001; Bundy et al., 2001; Rigby & Gaik, 2007). A conceptualisation of playfulness which is applicable to all children, regardless of disability, is also extremely relevant for occupational therapy, a profession which seeks to provide services to children with a wide range of disabilities. Consequently, the conceptualisation of playfulness used in this thesis is that described by Bundy (2004): playfulness is one construct, comprising four different elements which assist both researcher and clinicians in understanding the concept: freedom to suspend reality, internal control, intrinsic motivation, and framing.

2.10 Playfulness and preschool children

While it is clear that disabilities such as cerebral palsy, autism, prenatal alcohol exposure, and ADHD impact on children's playfulness, many of these studies have been conducted with school age children or children from a wider age range than just preschool aged children. It is also evident that playfulness has been linked with coping skills (Hess & Bundy, 2003), with two small studies confirming this relationship in preschool children (Ruckser-Scherb, 2010; Saunders et al., 1999). However, there is generally little known about playfulness specifically in preschool children, particularly within the Australian population.

While many studies have examined playfulness in a range of ages, only a few have examined playfulness specifically in preschool children (e.g. Brentnall et al., 2008; Saunders et al., 1999). It is essential to consider playfulness in young children because there is some evidence to suggest that children who have high levels of playfulness have more positive affect, emotional expression and emotion regulation (Barnett, 1991a; Elias & Berk, 2002; Fisher, 1992). The preschool years are very important because the play of 4-year-old children is more complex than in previous years, with the use of a variety of roles along with the symbolic use of objects that begins to emerge at a younger age (Bodrova & Leong, 2003). Further, the preschool years is when greater cooperative play is emerging as described in Parten's classification of social participation in play (Parten, 1932). Due to the significant and prolific developmental changes that occur during the preschool years (Case-Smith, 2014), this age group has been chosen as the focus of this study. Hence, while this age-group would seem to be homogenous, children's age is a

variable included in the research hypotheses because there may predictably be a difference between playfulness in children who are 48 months compared to those who are 60 months. The association between children's playfulness and coping skills or adaptability (Hess & Bundy, 2003; Saunders et al., 1999) is also worth considering in relation to school readiness at this transitional time of childhood. As such, further investigation of playfulness in preschool children, particularly in the Australian context, is warranted.

As discussed, there is little recent literature on potential precursors to playfulness, and many assessed playfulness using the Children's Playfulness Scale (Barnett, 1990) which relies on parental report. Consequently, further research into potential precursors is needed. The first study in this thesis will examine playfulness specifically in Australian preschool children, as well as potential correlates of playfulness in young children. The first part of the research enquiry is presented as an aim with a research question, as it is exploratory. This first part of the research enquiry will be useful in establishing a baseline of playfulness for South Australian preschool children which will enable international comparison. Further, there are few studies examining playfulness in preschool children specifically, and this is an important age-group on which to focus because of the changes in symbolic play and social play as discussed above. The second part of the enquiry is based on the relationships explored in this chapter, and aims to examine whether relationships between children's playfulness and a range of child and family characteristics are found in South Australian preschool children using a different conceptualisation of playfulness to that used in studies by Barnett and Kleiber (1982; 1984). This enquiry is also important because of how dated the previous research is, as well as the need to examine the issues in the local context. The aims of study 1 with related question and hypotheses are:

The aim of study 1 is to examine levels of playfulness in Australian preschool age children.

Question 1: What is the level of playfulness of preschool children in metropolitan Adelaide?

A second aim of study 1 is to determine whether a range of child and family characteristics are related to children's playfulness in metropolitan Adelaide. The hypotheses related to this aim are:

Hypothesis 1: Decreasing parent age will be related to increasing playfulness in preschool children from metropolitan Adelaide.

Hypothesis 2: Increasing socioeconomic status will be related to increasing playfulness in preschool children from metropolitan Adelaide.

Hypothesis 3: Children's age will be positively associated with playfulness in preschool children from metropolitan Adelaide.

Hypothesis 4: Children rated as having competent developmental skills by their preschool teachers (in their approach to learning, socioemotional development, gross and fine motor skills, and receptive and expressive language) will be more playful than children rated as less competent.

Hypothesis 5: Preschool aged boys will have significantly higher playfulness scores than preschool aged girls from metropolitan Adelaide.

2.11 Summary

An overview of children's play and playfulness has been presented in this chapter. This review of the literature has examined different play theories, and the importance of play. From the play literature, the term 'playfulness' has emerged and has been used to describe the style of a child's play. Playfulness is an important characteristic because it has been associated with adaptation, divergent thinking and coping skills in children. Because playfulness is so beneficial, it is important to develop a greater understanding of both personal and family characteristics that might facilitate playfulness, as it will help to guide future therapeutic intervention. The final section of the chapter presented the research aims for study 1. To address these aims, the section also included an exploratory research question and four hypotheses which will help to identify relationships between children's playfulness and both individual and family characteristics. The next chapter will explore the family context in relation to children's playfulness, and will use the literature to develop the hypotheses that form the basis for study two.

CHAPTER 3 - THE PLAYFUL ENVIRONMENT: THE ROLE OF PARENTING, ADULT PLAYFULNESS, ATTACHMENT AND MIND MINDEDNESS

The purpose of this chapter is to explore potential precursors to playfulness in young children, as these have been inadequately explored in the research literature. As discussed in Chapter 2, there has been some preliminary exploration of precursors, but the determinants of playfulness are still largely speculative. Given the importance of playfulness, as illustrated through its links to creativity, fluency of ideas, flexible thinking and coping skills, it is imperative that the precursors become clearer, as this will provide direction for future therapeutic interventions. The examination of potential precursors in this chapter considers a number of aspects that may influence the development of playfulness, starting with the earliest context for a child: the early attachment relationship. Throughout the chapter, the literature in relation to various parent characteristics and parent practices will be explored. The literature will be used to develop a model, based on attachment theory, which incorporates aspects of the caregiving environment such as mind mindedness, parent practices such as warmth, reasoning, consistency and hostility, as well as parent playfulness. It should also be noted that in building the model throughout this chapter, both the play and playfulness literature will be drawn upon because of the limited playfulness literature as well as the ambiguity of the terms (refer to section 3.1.3 for a more detailed explanation). The hypotheses for study 2 are built throughout this chapter, and then reiterated in Chapter 4.

Barnett and Kleiber (1984) discussed the impact of the early environment on children's playfulness, including family structure, parenting attitudes and practices, and various parent characteristics. Gibson (1986) also highlighted the human element involved in creating a physical and social environment that encourages exploration and increasing awareness of the world. In this context, infants learn that people, unlike inanimate objects, are responsive. For example, when a child cries, it summons a parent's attention.

Gibson's view about the role of the environment is consistent with a key model of occupational therapy: the Person-Environment-Occupation model (Law et al., 1996), which outlines the importance of a supportive environment (along with the person's skills and the nature of the task or activity) in determining the relative outcome of the activity or occupation (known as occupational performance). In fact, the environment both affords opportunities for individuals to perform activities as well as providing a catalyst or 'press' for specific types of behaviour (Kielhofner, 1985; Lawton & Nahemow, 1973). Further, it is the reciprocal interplay between personal and environmental factors which impacts on performance outcomes (Kielhofner, 1995). This interplay is particularly pertinent for infants and young children when considering the importance of reciprocity in the parent-child relationship as discussed by Baumrind (1994). Early mother-infant play routines would seem to have a key role in the development of children's play skills and playfulness (Sutton-Smith, 1980). In considering the early environmental context for playfulness, it will firstly be examined from the perspective of attachment theory, as Gordon (2014) maintains that experiences involving the relationship between infant and primary caregiver play the biggest role in shaping the infant brain. From her examination of both the play literature and attachment theory, Gordon maintains that a child's playfulness is either enhanced or inhibited through the attachment relationship in the first year of life. Further, attachment theory is an appropriate framework because it provides a multi-faceted framework to generate hypotheses and assist interpretation of the complex interactions between biological, interpersonal and environmental considerations (Crittenden & Ainsworth 1989).

3.1 Attachment theory

Attachment theory is the preeminent and most widely researched theory that explains the significance of the early relationship between infant and primary caregiver and explores the role of reciprocity in the parent-infant relationship. Attachment theory, based on the work of Bowlby (1969), proposes that a secure attachment to a primary caregiver during infancy is important for competent functioning throughout life (Crittenden & Ainsworth, 1989). Bowlby initially proposed the theory, emphasising the importance of the mother-infant bond in the first year of life and the critical impact of disruptions to this bond through separation, deprivation and bereavement (Bowlby, 1969;

Bretherton, 1992). Ainsworth built on the theory and developed key concepts of the theory, such as maternal sensitivity in responding to an infant and the role of the attachment figure in providing a secure base for an infant from which to explore the world (Bretherton, 1992). It should be noted that much of the key literature on attachment theory and child development emerged in the 1980s and 1990s, and is frequently cited in current literature. Therefore, this older literature is used in this thesis and supported by current literature where available.

Attachment is viewed not only as a discrete developmental milestone to be attained in infancy, but as a process necessary for continual adaptation (Cicchetti, Cummings, Greenberg, & Marvin, 1990). A fundamental premise of attachment theory is that a secure attachment is fostered by consistent, sensitive and responsive caregiving (D. Barnett et al., 1999). Parenting sensitivity involves being alert to the infant's signals, appropriately interpreting the signals, promptly responding, maintaining flexibility of both behaviour and attention, maintaining an appropriate level of control and negotiating suitably when infant and caregiver goals conflict (Ainsworth, Blehar, Waters, & Wall, 1978; Seifer & Schiller, 1995). Attunement to the infant's affect is an essential aspect of a secure attachment, and involves the parent carefully matching qualities of an infant's affect associated with a behaviour, for example, vocalising eagerness when an infant is reaching for a toy (Haft, 1989; Rees, 2005; Slade, 1987). This attunement signals emotional availability and is instrumental in helping the infant to recognise shared internal feeling states and to regulate his or her emotional states (Haft, 1989; Schore, 2001; Stern, 1985). Subsequent research has confirmed that more sensitive mothers have a greater likelihood of establishing secure attachment relationships with their children than do less sensitive mothers (De Wolff & van IJzendoorn, 1997; Meins, Fernyhough, Fradley, & Tuckey, 2001).

These explanations of attunement and parenting sensitivity would seem to be very congruent with a description by Knox (1996) of caregiving behaviour that seems to facilitate playfulness, and includes: relaxed and nurturing behaviour; being engaged with the child yet following the child's lead; demonstrating interest in the child's play; being responsive to the child's cues; modelling playful behaviour; encouraging curiosity; and promoting freedom and allowing choice. Consequently, this responsive caregiving behaviour that appears to nurture playfulness raises the question as to whether

parenting sensitivity and attunement to a child's signals is a necessary part of an environment that nurtures playfulness.

Bowlby (1982) clearly articulated the importance of the reciprocity of the attachment relationship, that is, both partners play a role in the reciprocity: the caregiver behaviour in seeking close physical contact with an infant and the child's attachment behaviour, defined as "seeking and maintaining proximity to another Individual" (p. 194). Both partners in the dyad have an important role in joint regulation (Hanzlik, 1990). Specific attachment behaviours comprise signalling behaviours such as crying, reaching and smiling, as well as approaching behaviours such as clinging, following and moving towards (Seifer & Schiller, 1995). The infant also engages in secure-base behaviour, which is the balance between proximity sought and distance/exploration (Seifer & Schiller, 1995).

Secure-base behaviour is important because the caregiver protects the infant in times of danger, it facilitates the infant's engagement in learning and exploration through interaction with the caregiver, and it also provides the opportunity for differentiation between self and other to occur (Seifer & Schiller, 1995; Stern, 1985). The infant is initially undifferentiated in the early parent-child relationship, with total dependence during the first few months, and then an emerging more organised sense of self becomes apparent through greater exploration as the infant progresses towards 12 months of age (Hofer, 1987; Seifer & Schiller, 1995; Stern, 1985). By 12 months of age, the child should be engaging in exploration during non-stressful situations, and this in turn should generally result in greater autonomy and age-appropriate play (Seifer & Schiller, 1995). The infant develops a sense of agency through parental responsiveness to his or her signals, and this demonstrates the role that a secure attachment relationship may play in the development of cognitions in relation to a sense of control (Bigelow et al. 2010; Carton & Nowicki Jr., 1994; Chorpita & Barlow, 1998). A strong sense of control is an important element of playfulness as described by Bundy (2004), again raising the question about whether a secure attachment relationship is necessary for nurturing playfulness in the child.

3.1.1 The importance of a secure attachment: Potential relevance for playfulness

This section focuses initially on secure attachment in infancy, and progresses to examining attachment in the preschool years. The reciprocity that occurs within a secure attachment relationship is essential for the development of attuned play which emerges during the first year of life (Gordon, 2014). The parent and child achieve emotional synchrony through shared vocal tones, eye contact and facial expressions (Schore, 1994). This synchrony is incredibly important for calming the infant when distressed, but also for activating positive emotions which are so necessary for the complex neurological function of organising the self (Schore, 1994). Attuned play that occurs within the context of the early secure attachment relationship becomes the foundation for exploratory play in the second year of life, both of which provide the beginnings of joy and playfulness throughout life (Gordon, 2014).

A secure attachment is essential for the infant in developing trust that a caregiver will respond appropriately to his or her needs. The instinctive reciprocal relationship plays a vital role in protecting the child, provides a sense of safety, and is a major organiser of brain development (Fonagy & Target, 2005; George, 1996; Schore, 2003). The presence of an early secure attachment relationship is also important for both cognitive and social development, and has been associated with intelligence and the ability to sustain attention (Ainsworth & Bell, 1974; Cicchetti, Rogosch, & Toth, 2000; Pasco Fearon & Belsky, 2004). Gordon (2014) contends that a secure attachment relationship also lays the foundation for playfulness throughout life and this has important implications because playfulness is vital for lifelong health and well-being.

Attachment theory proposes that the early attachment relationship results in the development of internal working models, that is, the individual's unconscious mental representations of the attachment figure's availability and the sense of self-efficacy or worthiness in relation to having his or her attachment needs met (D. Barnett & Vondra, 1999; Bowlby, 1980). Harter (2012) considers that construction of the self occurs at both a cognitive and social level, initially within the context of familial interpersonal relationships. Harter emphasises that the creation of the child's self largely occurs through how they are treated by significant others, as the child comes to view

him/herself consistently with others' appraisals of him/her. Therefore, children who perceive their parents to be emotionally available and supportive of their efforts at mastery will begin to view themselves as lovable and competent. Conversely, if children experience emotionally unavailable and unsupportive caregiving, they will form a working model of themselves as unworthy and incompetent. Harter (2006; 2012) further explains that children who experience rejecting and abusive parenting have little or no sense of self, that is, an 'impoverished self'. These internal working models are important in the development of self-regulation and a positive sense of self in relationships with others (D. Barnett & Vondra, 1999; Cassidy, 1994; Verschueren & Marcoen, 1996). This view of the self may also be potentially important for mutual emotional regulation in which positive emotions are experienced and negative emotions controlled (Seifer & Schiller, 1995; Tronick, 1989). Individuals who are securely attached display acceptance and integration of both positive and negative emotions, while those who are insecurely attached display limited affect or increased negative affect. This association between a secure attachment and both attention and emotion regulation suggests a potential relationship between a secure attachment and playfulness. Both attention and emotion regulation are consistent with aspects that are integral to Bundy's (2004) conceptualisation of playfulness including: positive affect, maintaining engagement in play, and control of self with others as shown by negotiating, sharing and initiating play.

Secure attachment has also been found to be associated with the development of symbolic play, a precursor to mentalising abilities (Meins et al., 1998). Symbolic play occurs when the young child understands the mental orientations of others based in the context of pretence (Meins et al., 1998). For example, infants who have a secure attachment to their mothers have been found to engage more in solo pretend play compared to those with insecure attachments (Belsky, Garduque, & Hrncir, 1984; Meins et al., 1998). Secure attachment has also been associated with greater confidence, autonomy, competence (Sroufe, Fox, & Pancake, 1983), task completion, problem solving, executive capacity, and object play (Belsky et al., 1984; Bigelow et al., 2010; Matas, Arend, & Sroufe, 1978; Meins et al., 1998). Secure attachment has also been found to relate to better play skills (Slade, 1987), and greater ability to integrate the play suggestions of an adult in pretend play sequences (Meins & Russell, 1997). Bowlby (1973) maintained the importance of a secure base and firm family support in encouraging self-

reliance. In order to foster self-reliance, Bowlby (1973, p. 362) suggested that it is important to have respect for a child's "personal aspirations, their sense of responsibility and their ability to deal with the world". Corriveau et al. (2009) observed that securely attached children show more flexibility than insecurely attached children, at times displaying strategies involving both self-reliance, as well as sometimes depending on a familiar caregiver. This sense of self-reliance seems to be related to the internal control aspect of playfulness, as described by Bundy (2004). Internal control involves aspects such as deciding what to do, modifying activities to make them more challenging or fun, and transitioning smoothly between activities. Bowlby (1973) discussed the anxious attachments that can develop between infant and primary caregiver as a result of periods of separation or family instability. He argued that anxiety and hostility can develop in a child as a result of experiencing severe and persistent frustration with a caregiver, and this can compromise a child's motivational system. Because intrinsic motivation is such an integral aspect of playfulness (Skard & Bundy, 2008), a lack of secure base then potentially threatens the development of playfulness in the child.

Bowlby's (1973) emphasis on the important role of a secure base and family support is also consistent with the view of many authors from the play and playfulness literature who stress the importance of the social environment of the child. Bundy, Waugh, and Brentnall (2009) explain that a child's performance during a play activity is nurtured by a supportive environment, so much so that it may actually disguise problems that the child may experience with the activity in a different environment. The play environment has long been considered to impact on creative potential (Bishop & Chace, 1971; Lieberman, 1965; Sutton-Smith, 1967). Various authors have discussed the need for children to feel safe and at ease in their environment in order to be able to engage in play (Hamm, 2006; Rubin et al., 1983; Skard & Bundy, 2008), and the key role that parents play as a play partner in providing opportunities for children to be playful (Rigby & Huggins, 2003). Within the environment, the quality of the parent as a play partner has important implications, particularly in relation to whether the parent is able to provide scaffolding to nurture the child's exploration (Bernier & Dozier, 2003). These play experiences help both the child to feel respected, as well as providing the parent with an opportunity to facilitate cooperation from his or her child and to experience enjoyable interactions together (Rigby & Huggins, 2003). The similarities between the importance of the early

environment from the perspective of both attachment theory and the play literature highlight the necessity of creating child-centred environments. Such environments need to be responsive to a child's cues, encouraging of the child's interests and also familiar and comfortable for the child, as these contexts nurture playfulness, cognitive development, emotional well-being and independence (Hanzlik, 1989; Okimoto et al., 2000; Rigby & Gaik, 2007).

3.1.2 Categories of attachment relationship

The quality of the early parent-child relationship is often discussed in the attachment theory literature as being either secure or insecure, and an understanding of these categories is important to understanding attachment theory. The major categories of attachment relationship were initially determined using the Strange Situation procedure (Ainsworth et al., 1978) in which 12-18 month old infants were separated for short periods of time from caregivers and their reunion behaviour observed. Attachment relationships are then assessed as being secure (Type B) or insecure, with insecure attachments being further divided into the categories of avoidant (Type A) and resistant (Type C) attachment patterns. Various researchers have since identified other classifications of attachment patterns, with Ainsworth acknowledging that an extensive number of insecure attachment patterns may exist (Ainsworth & Marvin, 1995; D. Barnett & Vondra, 1999). The fourth major additional attachment pattern that has been identified with high risk samples is referred to predominantly as disorganised (Type D) (George, 1996; Main, 1991; Main & Solomon, 1990).

A secure attachment pattern (Type B) is demonstrated by distress during separation and reunion behaviour that is characterised by the infant seeking proximity and physical contact with the caregiver which results in resolution of the distress and a continuation of exploration (George, 1996; Zeanah, Berlin, & Boris, 2011). Avoidant (also referred to as anxious avoidant) infants (Type A) show little response to separation from caregiver and then actively avoid and ignore the caregiver upon reunion (George, 1996; Zeanah et al., 2011). An anxious resistant attachment pattern (Type C) is characterised by intense distress upon separation and then on reunion, the infant may seek proximity, comfort and physical contact with the caregiver, although this does not meet the infant's needs and he or she is unable to be comforted or resists the caregiver's attempts to soothe

(George, 1996; Zeanah et al., 2011). A disorganised attachment pattern (Type D) is characterised by inconsistent responses to the caregiver which may include a mixture of quick, disjointed sequences of seeking proximity, avoidance or resistance, or an inability to use the caregiver as an attachment figure, such as showing fear or preferring to go with a stranger (Zeanah et al., 2011).

Procedures have also been developed to assess security of attachment in children older than two years. However, these procedures have been problematic at times; for example, a much lengthier period of separation is often needed to elicit a response in preschool aged children (Solomon & George, 1999). Solomon and George (1999) provide an excellent review of the many methods for measuring attachment security in 2- to 6-year-old children, with one commonly used assessment being the Q-sort method by Waters (1995) which involves detailed observations of the child's behaviour at home by trained raters. However, a detailed description of the different methods of classifying attachment in the preschool years is beyond the scope of this thesis.

In addition to various methods of assessing attachment relationships in preschool children, a number of longitudinal studies have also documented behaviours in preschool children that seem to be associated with different attachment styles as assessed during infancy. For example, securely attached infants, when re-assessed at preschool age, have been found to be more independent, empathetic and socially competent, as well as less aggressive and noncompliant than those who had been insecurely attached (DeMulder, Denham, Schmidt, & Mitchell, 2000; Erickson, Sroufe, & Egeland, 1985; Sroufe, 1983).

3.1.3 A model of attachment and playfulness

Much of the early research on attachment theory was conducted with families experiencing child abuse and/or neglect because of the greater likelihood of these families displaying insecure attachment relationship patterns (D. Barnett et al., 1999). The relationships found in one of these prominent attachment studies by Aber and Allen (1987) represent a useful way of conceptualising the relationships between a secure attachment and play. Aber and Allen (1987) found links between insecure attachment relationships and difficulties with exploration of the object world, symbolic play, problem solving, relationships with others and secure readiness to learn (i.e. being secure in

relationships with adults), which in turn allows the child to feel able to venture out and explore the world. This secure relationship is essential for developing a healthy self concept (Verschueren & Marcoen, 1996), which in turn is needed for forming positive relationships with peers and other adults. A model of attachment theory, child development and play, based on relationships found in a study by Aber and Allen (1987) is presented in Figure 3.1. Based on this model it seems that the secure base helps to nurture exploration, trust, representations of self, and secure-readiness-to-learn which in turn facilitates the skills in the outer circle.

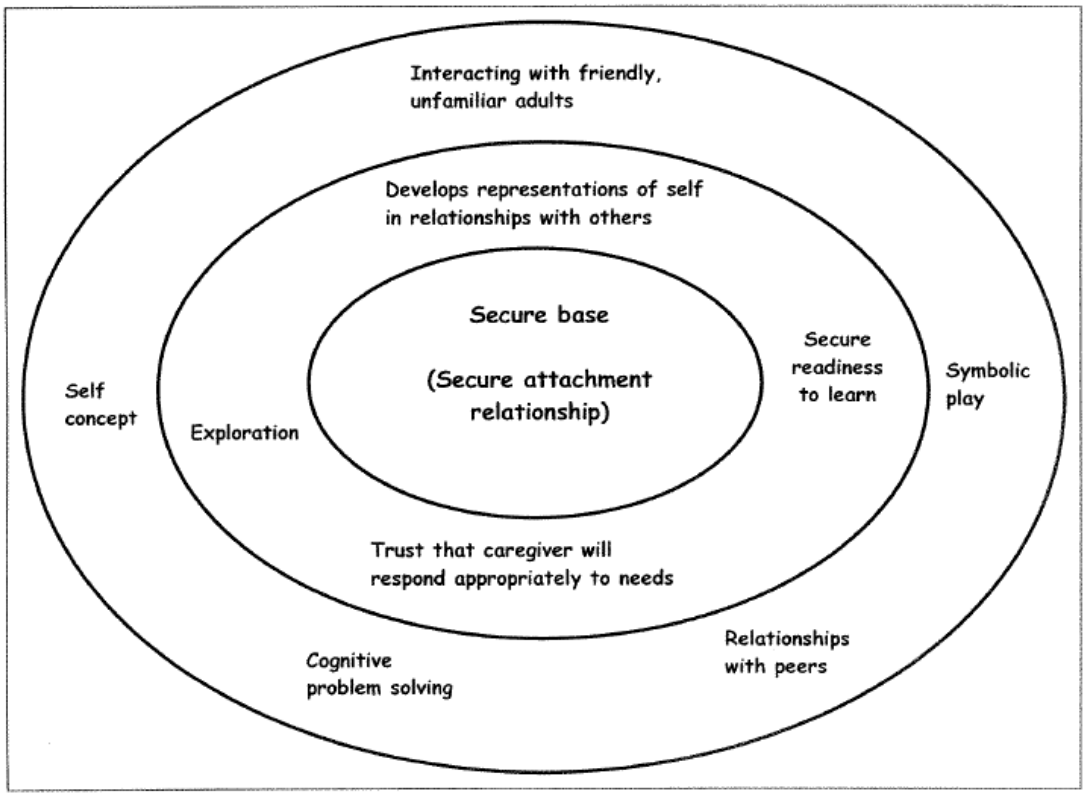


Figure 3.1 A model of child development and play based on attachment theory, based on the work of Aber & Allen (1987, pp.410-413).

Exploration of the model in Figure 3.1 in combination with the attachment theory literature examined earlier in this chapter highlights many potential relationships with Bundy's (2004) conceptualisation of playfulness. Many of the attributes found to be associated with a secure attachment relationship such as problem solving, interacting with others effectively, symbolic play, regulation of affect and adapting to the environment would seem to be related to elements of children's playfulness, including intrinsic motivation, internal control, freedom to suspend reality, and framing (as

discussed in Section 2.8). For example, self-reliance and autonomy as described by Bowlby (1973) and Seifer and Schiller (1995) would seem to be related to internal control (i.e. being in control of one's own actions). The association with solo pretend play and symbolic play, as found by Belsky et al. (1984) and Meins et al. (1998), form the playfulness element of freedom to suspend reality (i.e. engagement in pretend play forms a large part of this element). The family instability that seems to impact on both secure attachment relationships and children's motivational systems as suggested by Bowlby (1973) connects well with intrinsic motivation (i.e. inner drive). Finally, the connection between an insecure attachment relationship and a child's ability to form effective relationships with others (Aber & Allen, 1987) highlights a potential parallel with framing (i.e. the giving and receiving of cues). Figure 3.2 incorporates these potential elements of playfulness into the model. Playfulness is represented in the model as a square because the relationship between playfulness and the other elements is as yet unknown.

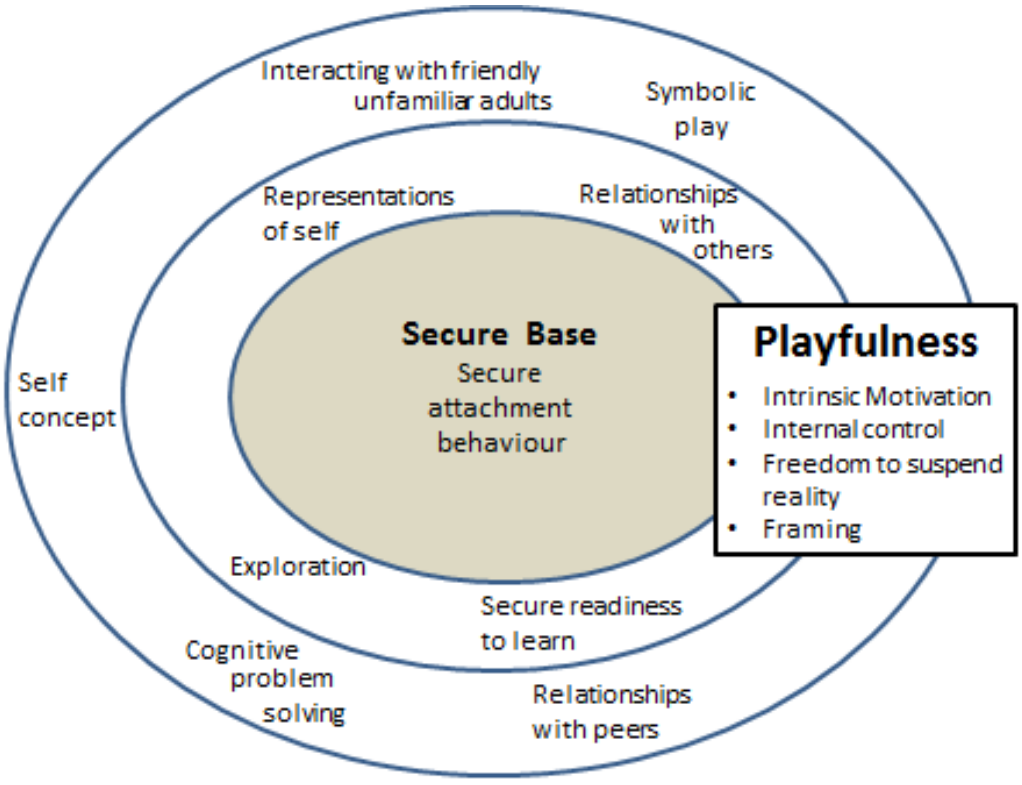


Figure 3.2 Potential model of secure attachment and children's playfulness

When building the theory related to this model throughout Chapter 3, while it is a model of playfulness, it is necessary to draw on both play and playfulness literature for two reasons. Firstly, in instances where there is little or no literature relating playfulness to the concept being examined (e.g. attachment, mind mindedness), then it is necessary to draw on the play literature to make these links where relevant, especially where more literature is available. Secondly, due to the contention in the literature around the definitions of play and playfulness, it is important to draw on the play literature so that valuable information is not overlooked. For example, Rubin et al. (1983) included disposition in their definition of play, and Eberle (2014) considers that play is an attitude: both of these definitions are consistent with playfulness, and demonstrate the need to draw on both bodies of literature.

While many of the relationships proposed between security of attachment and playfulness in the model are based on assumptions from the literature, the strongest associations are with symbolic play which is intricately linked to playfulness, specifically the freedom to suspend reality. As discussed, relationships between attachment security and symbolic play have been examined. For example, Meins et al. (1998) found that 19 securely attached toddlers (aged 31 months) were better able to incorporate the pretend play suggestions of a researcher into their symbolic play sequences than were insecurely attached toddlers (n=14). This finding supports previous research in which eight securely attached toddlers observed in mother-child dyad play engaged in longer episodes of symbolic play and spent longer periods of time planning their sequences than did seven anxiously attached peers (Slade, 1987). However, the impact of the small sample size on the reliability of the results should be considered. A study of children with Autism Spectrum Disorders did not find this relationship between a secure attachment and symbolic play (Marcu, Oppenheim, Koren-Karie, Dolev, & Yirmiya, 2009). Marcu et al. did, however, find children with organised attachment behaviours had greater skills in symbolic play than did those with disorganised attachments.

Belsky et al. (1984) found that securely attached infants and toddlers were able to engage in more cognitively sophisticated exploration of the environment in play, and were more able to show their cognitive competence in free play (which involved object substitution and early pretend play sequences) than were their insecurely attached peers. They theorised that the secure base provided the child the freedom to focus on and engage

with the environment rather than being concerned about the environment, and this relates to an aspect of Bundy's internal control in which the child feels sufficiently safe to play. Demoss (1999) found that 15 securely attached 4-year-old children engaged in the most advanced level of symbolic play for greater proportions of the time and longer stretches of time compared to 15 insecurely attached peers. This was demonstrated in solo play undertaken while mothers were busy completing forms. Demoss (1999) suggested that mothers of securely attached children provided sufficient guidance to facilitate their children to get started in play whilst then allowing children to direct their own play, which then resulted in the highest levels of symbolic play. The secure children were also able to use their mothers' presence as a secure base which assisted them in structuring their play for longer periods.

Security of attachment relationship has also been examined in relation to playful mother-child interaction or exploration. Mothers of insecure infants seem to be over-intrusive in their infant's play, with a tendency to overstimulate or lack discriminating responses to their infant (Leyendecker, Lamb, Fracasso, Schölmerich, & Larson, 1997). Further, Blehar, Lieberman, and Ainsworth (1977) found that securely attached infants tended to be more responsive in interactions than were anxiously attached infants, who were less responsive and negative in their interactions with their mothers. However, there has been limited research of security of attachment and playfulness, and existing studies have tended to utilise a restricted conceptualisation of playfulness. For example, Main (1983) studied 40 toddlers, 25 of whom were securely attached, and 15 insecurely attached. Toddler interactions were classified as being either playful or not playful on the basis of the amount of exploration of objects, whether a ball was played with in a teasing or sporting way or whether there was avoidance of a playmate and resistance to engagement. While this study was very detailed in terms of observations of children's playful behaviour, the conceptualisation of playfulness was not clear. Therefore, the current study will expand on this aspect by using more recent conceptualisations of playfulness, as it seems promising that there is a likely relationship between children's playfulness and secure attachment. Therefore, hypothesis number 6 for this thesis is:

> *Children identified as having lower levels of attachment behaviour problems will have greater levels of playfulness than those identified as having higher levels of attachment behaviour problems.*

3.2 Mind mindedness

The intergenerational nature of disrupted attachment relationships is well documented and accepted (Bernier & Dozier, 2003). It has been commonly proposed that parental responsiveness and sensitivity to the child's signals is one of the mechanisms by which attachment patterns are transmitted (Bernier & Dozier, 2003). However, research has found a weak association between security of attachment and maternal sensitivity (De Wolff & van IJzendoorn, 1997), perhaps because recent definitions of maternal sensitivity had potentially deviated from Ainsworth's original concept (Meins et al., 2001). Recent suggestions have described mind mindedness as the more likely mechanism by which attachment patterns are transmitted between generations (Arnott & Meins, 2007; Bernier & Dozier, 2003).

Mind mindedness is the inclination of a caregiver to treat his or her child as an individual with his/her own mind, rather than simply a being with needs that must be met (Meins, 1997; Meins & Russell, 1997). This sensitivity to the child's mental state, rather than simply responding to physical and emotional needs, is considered to be essential for the development of secure attachment relationships (Meins, 1997).

3.2.1 Parent reflective functioning

Meins (1997) further operationalised Fonagy et al.'s (1991) concept of a parent's reflective functioning (i.e. a parent's ability to understand the mental states of the self and others) by including a capacity to reflect on aspects such as feelings, perceptions and reactions. A parent's reflective function is considered to be his or her ability to mentalise (i.e. have psychological insight into another person's feelings, intentions, desires and beliefs) in the context of his or her attachment style (Fonagy et al., 1991; Sharp, Fonagy, & Goodyer, 2006). The operationalisation of mind mindedness involves the parental ability to form a representation of a child's internal state which then guides the way a parent engages with his or her child behaviourally (Meins, 2012; Meins et al., 2012; McMahon & Meins, 2012).

Fonagy et al. (1991) stressed the importance of the reflective self in parenting, particularly because of the helplessness of the infant, both physically and mentally. "The caregiver needs to have the capacity to contain the infant's overwhelming affects,

anticipate his or her psychological as well as physical needs, adapt readily to his or her perspective, and manipulate the external world to fit it" (Fonagy et al. 1991, p. 207). Meins et al. (1998) suggested that mothers of children who have a secure attachment are more likely to treat their child as an individual with their own mind or as a mental agent from an early age. Arnott and Meins (2007) found that mothers who demonstrated high reflective functioning were less likely to make inappropriate comments regarding their six month old infants' internal states.

3.2.2 Attachment transmission gap

There have been numerous efforts to try and identify the attachment transmission gap, that is, how parents' mental representations of attachment seem to get transmitted to their children (van Ijzendoorn, Dijkstra, & Bus, 1995). Proposed mechanisms for attachment transmission have included synchrony between parent and child (Isabella & Belsky, 1991) and sensitive responsiveness. However, through investigations into how a parent's mental state influenced a child's attachment security, much of the variance was still unexplained (van Ijzendoorn et al., 1995). Fonagy and Meins and their colleagues continued to research whether reflective functioning or mind mindedness could explain this identified attachment 'transmission gap' (Fonagy & Target, 2005; Meins, 1999). Fonagy et al.'s (1991) view that a firmly established reflective self can only be developed through that early secure attachment relationship certainly seems consistent with the cyclical nature of attachment. Likewise, Meins (1999, p.351) considered that a parent's "ability to talk coherently about their attachment experiences might relate to individual differences in their patterns of interaction with their infants". Meins et al. (1998) also pointed out that much of the research on the transmission gap operationalised maternal sensitivity as the mother's level of connectedness with the child and promptness or frequency of response, but ignored the key construct of sensitive responsiveness (i.e. whether the responses were appropriate or not).

The original definition of sensitivity by Ainsworth, Bell and Stayton (1971) emphasised the importance of a mother's ability to view the child as a separate entity and to see things from the child's perspective. Meins (1997) proposed that the ability to understand the child's mental state is essential to sensitivity, which requires the ability to both correctly perceive as well as interpret the child's cues. While maternal sensitivity does predict

attachment security, mind mindedness has been found to be a better predictor, accounting for 12.7 per cent of the variance in attachment security, compared with 6.5 per cent for maternal sensitivity (Meins et al., 2001). While mind mindedness seems to be a better explanation for the mechanism underlying attachment transmission than parental sensitivity, much of the variance is still unexplained.

3.2.3 Mind mindedness, attachment and maternal sensitivity

Relationships have been found among mind mindedness, sensitivity and secure infant attachment, with some evidence that sensitivity mediates the relationship between mind mindedness (MM) and attachment security, again providing support for the idea that MM is a prerequisite to sensitivity (Laranjo, Bernier, & Meins, 2008; Lundy, 2003). On the other hand, Demers, Bernier, Tarabulsy, and Provost (2010) failed to find an association between a mother's mental descriptors and maternal sensitivity. However, when the authors further coded mind-related comments into a positive, negative or neutral valence, the outcome was a significant association between positive mind mindedness and maternal sensitivity (Demers et al., 2010). Meins et al. (2012) also found that mothers who had a secure attachment with their infants had significantly greater scores for appropriate mind-related comments and significantly lower scores for non-attuned mind related comments than did mothers in the insecurely attached groups (avoidant, resistant or disorganised).

In a study relating to potential predictors of secure attachment, the relative contributions of maternal sensitivity and maternal mind mindedness were closely examined (Meins et al., 2001). The authors found that maternal sensitivity (as described by Ainsworth) and mind mindedness were related, but distinct, aspects of the parent-child relationship. The initial five indices tested and used to measure mind mindedness included: maternal responsiveness to (1) a change in an infant's line of gaze and (2) an infant's object directed action; (3) mother's imitation of the infant; (4) encouragement of autonomy (such as sitting rolling etc); and (5) use of appropriate mind-related comments when talking with the infant (Meins et al., 2001). The first two aspects showed that mind minded mothers tended to be in tune with their infants' changing focus of interest or attention and used this to plan how to respond (i.e. they watched for the infant's line of gaze and any interaction with objects) (Meins, 1999). A mother's ability to recognise her

child's intentionality was evident through her encouragement of autonomy and the infant's ability to imitate, both of which were viewed as indicative of mind mindedness (Meins, 1999). All of these five indicators would seem to be consistent with Knox's (1996) view of parenting behaviour that facilitates playfulness, including being engaged and interested in the child's play, following the child's lead, and being responsive to the child's cues. Interestingly however, of all the indicators of mind mindedness, the only category of maternal behaviour that significantly predicted security of attachment, six months later, was a mother's ability to describe her child with mind-related comments such as "Which toy do you prefer" or "Do you recognise that" (Meins et al., 2001, p. 641).

Mind mindedness has been consistently shown to predict security of infant-parent attachment (Arnott & Meins, 2007; Meins et al., 2001), for example, mothers of six month old infants who have high levels of MM have been found to form secure attachments with their children six months later (Meins et al., 2001).

Mothers of securely attached children are more likely to be able to describe their child in terms of mental characteristics than are mothers of insecurely attached children, and the concept of MM would seem to be unrelated to infant temperament (Meins et al., 1998; Meins, Fernyhough, Arnott, Turner, & Leekam, 2011). Meins, Centifanti, Fernyhough, and Fishburn (2013) also found that maternal mind mindedness was negatively related to children's internalising and externalising behaviours in families of low socioeconomic status. They suggested that maternal mind mindedness might in fact protect children from risk factors known to occur as a result of low SES, such as maternal depressive symptoms, and lack of perceived social supports. Meins et al. (2001) acknowledged that mind mindedness and sensitivity are separate constructs, but that mind mindedness appears to be more closely related to the original definition of maternal sensitivity and responsivity than the misinterpretations which have commonly occurred in the research literature.

3.2.4 Mind mindedness, parenting and the environment

In a study which examined mothers' emotional availability to their 4-year-old children, Lok and McMahon (2006) found that MM was related to maternal non-hostility, that is, mothers with higher levels of MM were less likely to display hostility during interaction

with their children. These relationships between emotional availability, non-hostility and mind mindedness are important to consider in the context of environments that may be conducive to playfulness, especially in ensuring that children feel both emotionally and physically safe enough to play, as suggested by Bundy (2004) as being important for promoting spontaneous and intrinsically motivated play. Lok and McMahon (2006) considered that a mother who views her child as an individual may be less likely to display disrespectful behaviour towards her child and more likely to encourage mentalising abilities in the child (i.e. the ability to understand others' mental orientations to the world).

Consideration of the role that non-hostility plays in the development of mentalising abilities is important because mentalising abilities, empathy and the development of functional relationships with others are interrelated (Anckarsäter, 2006). This may explain why a secure early attachment relationship influences a child's later ability to engage with others on a level that shows understanding of their individual orientations to the world (Meins et al., 1998). Bishop and Chace (1971) proposed that environments that stifle playfulness include those that impose control, restrictions or moral convictions, including those that dictate what the child 'ought' to do, thus depriving the play experience of freedom, joy and exploration. It seems then that the ability to be mind minded might be a key factor in promoting playfulness, as emotional unavailability and hostility may be a barrier to playfulness.

3.2.5 Mind mindedness, children and play

Fonagy et al. (1991) discussed the importance of the reflective self in emotional development during early childhood. They maintained that children can only make sense of their world if they can understand the mental world of both themselves and others in terms of wishes, feelings, beliefs, regrets and values, also known as mentalising abilities. During the third year of life, children develop the capacity to understand that their own feelings and intentions are different from those of other people (Fonagy et al., 1991). This capacity to understand the feelings and intentions of others is evident through the differences found in internal state language used between securely and insecurely attached infants and toddlers in a longitudinal study, whereby securely attached children displayed greater use of terms to describe positive emotion (Lemche, Kreppner,

Joraschky, & Klann-Delius, 2007). It is proposed that the early secure attachment relationship provides opportunities for the child to engage with the mental orientations of others which then helps in forming the child's view of their world in terms of themselves and others (Meins et al., 1998). Fonagy et al. (1991) pointed out that this ability to mentally represent both themselves and others is closely linked to the ability to regulate affect. The quality of the early parent-child attachment has a role in helping the child adapt to their environment, and this impacts on regulation of affect, social adaptation and cognitive resourcefulness (Fonagy et al., 1991).

Children who have demonstrated a secure attachment pattern tend to be better at mentalising than those with insecure attachments, and there is evidence to suggest that internal state language at 2 years of age is related to Theory of Mind (ToM) performance in 4-year-old children (Meins, 2012). ToM refers to a child's understanding of mental states, such as perceptions, desires, intentions and beliefs (Laranjo, Bernier, Meins, & Carlson, 2010). Children with secure attachment relationships have been found to have a higher performance on ToM tasks compared with children with insecure attachments (Fonagy & Target, 1997; Meins et al., 1998; Meins, 1999). Further, both secure attachment and mentalising abilities have been associated with a mother's mind-related comments (Laranjo et al., 2010; Meins et al., 1998; Meins, 1999).

However, there is a need for ongoing research in this area, because measurement of theory of mind has been largely inconsistent, and there may also be other mechanisms at work that may be related to mind mindedness (Meins, 2012). For example, mothers who have the capacity to comment appropriately on their child's internal state may also be likely to provide detailed explanations to their pre-schooler, be very responsive to their child's questions, or may engineer interactions with their child aimed at providing a sense of competence. Hughes and Leekam (2004) cautioned against making assumptions from the literature about theory of mind development. For example, while there are associations between socioeconomic status (SES) and theory of mind, there has been little consideration of how SES is also related to IQ, which is also greatly impacted by genetics. Hughes and Leekam also highlighted the myriad of factors that may be involved in theory of mind development, such as the range of social experiences that may impact, the importance of differentiating between acquisition and application of theory of mind, and specific aspects of development that have not been adequately researched (e.g.

emotion understanding). Experiences that demonstrate young children's mind reading abilities include: conversing about inner states, engaging in pretend play with others, narratives, deception, jokes, conversations about shared memories, and negotiating to resolve conflict (Dunn, 1999; Hughes & Leekam, 2004).

In response to the stated need for further research of theory of mind, infant gaze is also an aspect that has recently been found to be associated with theory of mind (Brooks & Meltzoff, 2015). Brooks and Meltzoff (2015) found a predictive relationship between infants' gaze following at 10.5 months and their use of mental state terms at 2.5 years. An additional significant finding was that use of mental state language at 2.5 years of age strongly predicted children's understanding of false belief at 4.5 years. The false belief task (i.e. the ability to attribute a false belief to someone else) is a commonly used method of assessing theory of mind, as it shows that children are able to consider views that are different from their own (Hughes & Leekam, 2004). Such research demonstrates the potential significance of the early relationship between infant and primary carer and the importance of joint attention.

A concept that would seem to be related to ToM, is that of decentering, or the ability to take on the viewpoints of others which occurs at early school age because there is less preoccupation with one's own viewpoint (Cordier et al., 2010b; Frith & De Vigemon, 2005). In a playfulness study involving school aged children with ADHD, Cordier et al. (2010b) discussed playfulness and empathy. Empathy involves both affective and cognitive aspects, and the construct includes discerning and identifying the emotional states of others, the ability to take on the perspectives of others, as well as experiencing an affective response that is shared (Feshbach, 1997). In keeping with Feshbach's explanation of empathy, Cordier et al. (2010b) theorised that elements of empathy related to aspects of playfulness as measured by the ToP, and this involved: responding to the cues of others in play; the skilfulness of sharing, transitioning and pretending; the skill and intensity of playing with others and the skill of supporting the play of others. Based on Cordier's view, it is plausible to consider that children with insecure attachments who are less able to mentalise and perform well on ToM tasks, may potentially also have difficulty with decentering, and therefore have difficulties with similar playfulness items as those that he and his colleagues associated with empathy.

Symbolic play is considered to be a precursor to mentalising abilities, with solo pretend play emerging in the second year, and developing into collaborative sessions of pretence in the third year (Meins et al., 1998). Securely attached children have been found to score more highly in symbolic play than insecurely attached peers, where symbolic play was measured using coding of both elicited play and instructed play (Meins et al., 1998). Elicited play involved providing a child with play objects and asking him or her to show what could be done with them, and instructed play included providing specific instructions of what to do, such as using aluminium foil as though it is a mirror for a doll. Findings also indicated that securely attached children, as assessed in infancy, had a greater ability of incorporating the pretence suggestions of the researcher into their play at 31 months than did insecurely attached children (Meins & Russell, 1997). A further study with the same sample found a relationship between security of attachment and mothers' tendencies to describe their children in terms of mental characteristics (Meins et al., 1998). The authors proposed that the differences in symbolic play that related to attachment security may also be related to the parent's mind mindedness.

Mind mindedness, therefore, has an important role in the development of mentalising abilities, theory of mind and symbolic play, all of which seem to be concepts that are related to elements of playfulness. The relationship between mind mindedness and early symbolic play in particular lays the foundation for more sophisticated pretence (Meins et al., 1998), which is integral to playfulness. Further, mind mindedness has its origins in attachment theory, and as such is an important characteristic to include in the model, as shown in Figure 3.3 Model of attachment, playfulness and mind mindedness.

The association between children's symbolic play and parental mind mindedness in particular indicates a potential relationship between parental mind mindedness and children's playfulness. Hence, the seventh hypothesis is:

> *Increasing levels of parent mind mindedness will be associated with greater playfulness in preschool children.*

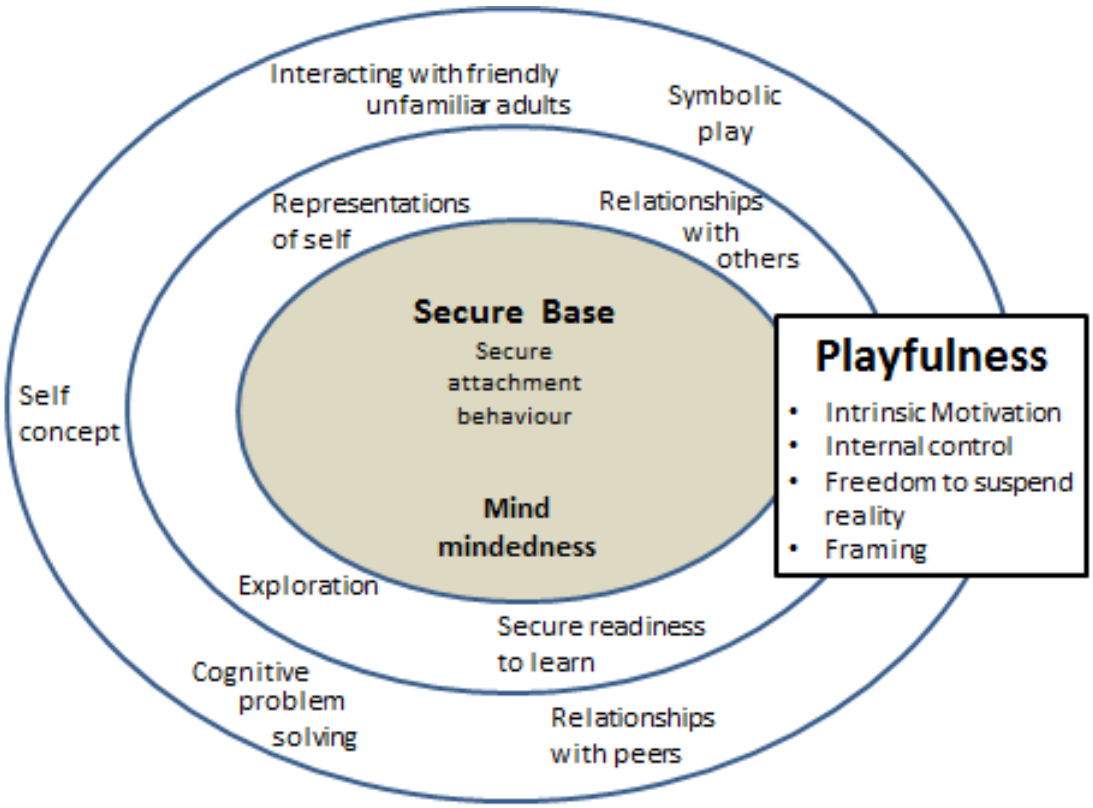


Figure 3.3 Model of attachment, playfulness, and mind mindedness

3.3 Parenting

Maternal sensitivity and mind mindedness (MM) would seem to be key to creating family environments which foster joy and spontaneity. The association found by Lok and McMahon (2006) between MM, emotional availability and non-hostility highlights the need to examine parenting practices more closely in relation to creating playful environments. The key role of the secure base, responsivity and MM in a child's development, and in particular their development of play, has been discussed in the model presented in Figure 3.3. Such associations then raise the question about whether specific parenting practices associated with warmth, consistency, hostility and reasoning might also influence whether the environment is conducive to playfulness. The everyday challenges and caregiving demands that arise within the context of the parent-child relationship typifies the parenting process and role (Crnic, Low, & Bornstein, 2002). It is widely accepted by developmental researchers that parenting during early childhood influences child development and promotes child well-being (Belsky, 2007; Zimmer-Gembeck & Thomas, 2010).

3.3.1 What is parenting?

Traditionally, the word 'parent' has been used to describe a biological or other legal relationship with a child (Arney, 2004; C. A. Smith, 1999). However, 'parenting' goes beyond this static role to include a more action-oriented role involving the care, nurturance and protection of children whilst maintaining accountability for a child's emotional, social and physical growth and development (Arney, 2004; C. A. Smith, 1999). Gutman and Feinstein (2010) suggested that parenting is sometimes assumed to encompass consistent, enduring qualities (Baumrind, 1989; Darling & Steinberg, 1993). However, parenting is not a static role, but rather a complex process involving bidirectional relationships of at least two members of different generations and occurs within the context of parental work patterns, availability of appropriate child care and social supports, parenting stresses and the individuality that both child and parent bring to the relationship (Bronfenbrenner, 1979; Gutman & Feinstein, 2010; Jack, 2000; Lerner, Rothbaum, Boulos, & Castellino, 2002).

Baumrind's (1966) seminal work outlined a classification of three parenting styles (authoritarian, permissive, and authoritative) which has provided a foundation for prolific research on parenting and its impacts (Brenner & Fox, 1999). Authoritarian parenting involves maintaining high levels of control, expectations of obedience and that an absolute standard of conduct will be maintained, actions to curb self-will in the child, and demands for respect for authority, work and order (Baumrind, 1968). Authoritative parenting includes a combination of firm control, maintaining high demands, whilst also positively encouraging verbal give and take, and the child's autonomy and independence (Baumrind, 1970). The permissive parent makes few demands on the child in terms of household responsibilities and behaviour, is consultative about family rules, uses reason to guide the child, and has a non-punitive and accepting manner towards the child (Baumrind, 1968). A neglecting parenting style was later added to the classification of parenting styles, and this included under-involvement in the parenting role, with minimal response to the child's needs or behaviour (Baumrind, 1971; Brenner & Fox, 1999).

Darling and Steinberg (1993) examined the complex issue of parenting, and maintained that it was important to differentiate between two aspects of parenting in order to achieve desired parental goals: (1) parenting practices (i.e. specific parenting behaviour)

that are used to achieve parenting goals, and (2) parenting styles (an array of beliefs and attitudes that provide an emotional climate and context in which parenting behaviours occur). Brenner and Fox (1999) examined specific parenting practices, including discipline (the response to difficult behaviour), nurturing (behaviours that foster psychological growth), and expectations (tasks that the parent considers the child should have the capacity to achieve). Brenner and Fox (1999) found some convergence between parenting practice clusters and Baumrind's parenting styles. For example, cluster 2 which included low to moderate levels of discipline, high nurturing and high expectations seemed to correspond with Baumrind's authoritative parenting style. Therefore, parenting style and parenting practices are obviously highly related. However, it is important to differentiate between parenting style and parenting practices because it has implications in terms of research methodology when determining parental influence on a range of child outcomes (S. M. Lee, Daniels, & Kissinger, 2006).

It may be most useful to consider specific parenting practices within a parenting style or typology, as parenting practices may relate more directly to the particular developmental outcomes being examined (Darling & Steinberg, 1993; Robinson, Mandleco, Olsen, & Hart, 1995). Parenting practices have both immediate and long-term outcomes for a child, while parenting style has a more indirect impact (Brenner & Fox, 1999). Parenting practices, behaviours and parental interactions with children have been found to be significantly related to children's developmental outcomes such as social and cognitive development (Gutman & Feinstein, 2010; Magill-Evans & Harrison, 2001).

3.3.2 The significance of different parenting practices

High levels of hostility are expected in authoritarian parenting (Micklewright, King, O'Toole, Henrich, & Floyd, 2012). Power coercion disciplinary methods are consistent with harsh and hostile parenting within familial environments which have been found to result in behavioural problems such as aggression and negative emotional reactivity (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Scaramella & Conger, 2003). Harsh parenting also predicted a child's externalising difficulties such as aggressive and oppositional behaviour (Laible, Carlo, Torquati, & Ontai, 2004). Hostile parenting practices have been associated with young children who display negative affect, are emotionally negative and highly reactive, which then places them at risk of conduct

problems (Campbell, Shaw, & Gilliom, 2000; Lagacé-Séguin & d'Entremont, 2006; Shaw, Owens, Giovannelli, & Winslow, 2001). Further, high hostility and low consistency have been linked with a greater risk of conduct problems in 4- to 5-year-old children (Yu, Ziviani, Baxter, & Haynes, 2010). The ongoing impact of hostile parenting is also evident in the teenage years, with an elevated risk of youth aggression and misconduct (Brannigan, Gemmell, Pevalin, & Wade, 2002).

Hart, DeWolf, Wozniak, and Burts (1992) found that preschool children of parents who used inductive discipline (such as coaching children using explanations and logical consequences) demonstrated fewer disruptive behaviours in the playground than did children of parents who used power assertion methods of discipline (such as coercion, physical punishment, directives, threats and belittling, many of which are consistent with hostility). Children with inductive mothers also showed more prosocial behaviour than did children with power assertive mothers. Inductive disciplinary practices correspond with elements such as consistency and reasoning, which are also important in authoritative parenting as discussed by Micklewright et al. (2012). However, low consistency is associated with permissive parenting (Micklewright et al., 2012). Further, inconsistent parenting has been associated with child behavioural issues such as aggression, oppositional behaviour, and internalising difficulties (Stormshak, Bierman, McMahon, & Lengua, 2000).

The parenting practices of warmth and involvement have been found to be negatively related to children's externalising symptoms (McKee et al., 2008). Externalising symptoms have been described by Achenbach, Edelbrock, and Howell (1987) as aggressive, undercontrolled, destructive and noncompliant behaviours, compared with internalising symptoms such as anxious, depressive, socially withdrawn and overcontrolled behaviours. Further, warm parenting has been shown to predict a child's social competence (Laible et al., 2004). Baumrind (1970) stressed the importance of authoritative parenting for appropriate socialisation of the child and for the development of instrumental competence, that is, becoming independent and socially responsible.

Appropriate development of emotional regulation in the first four years of life is largely influenced by parenting behaviours (Kim & Cicchetti, 2010). An authoritative parenting style has been associated with adaptive emotion regulation which includes appropriately

managing behaviour when experiencing strong emotions, filtering the emotional experience and using appropriate strategies to contain uncomfortable emotions (Karim, Sharafat, & Mahmud, 2013). These same associations have been found with specific parenting practices that are consistent with an authoritative style. For example, Dennis (2006) found a relationship between a child's ability to emotionally self-regulate and the parenting dimensions of warmth and control, whereby control is not necessarily coercive but includes guiding the child, encouraging appropriate behaviour and providing some critique when the child is not behaving as expected. However, in families with more extreme parenting practices, developing appropriate emotion regulation is more difficult. This is because, in maltreating families, "parents are less likely to be available to provide support and scaffolding when their children are upset", and consequently children do not get the opportunity to learn constructive strategies to regulate their emotional states (Kim & Cicchetti, 2010, p.707).

The importance of warm and firm parenting for developing emotion regulation and social competence has critical implications for promoting playfulness. For example, many of the internal control items on the ToP (Bundy, 2004) require social competence and the ability to emotionally regulate; these include negotiating, supporting the play of others, playing skilfully with others, and entering the play of others. Further, emotion regulation is also a vital part of intrinsic motivation which is displayed through engagement in play and positive affect. Emotion regulation seems particularly relevant given the association between hostile parenting and emotional negativity (Campbell et al., 2000; Shaw et al., 2001).

3.3.3 Restrictive parenting

Bishop and Chace (1971) highlighted the role that restrictive environments have in stifling playfulness and in depriving the play experience of joy and exploration. After the establishment of her classification of parenting styles, Baumrind (1994) later focused on an extreme parental context, that of child abuse and neglect. She drew on parenting dimensions outlined by Maccoby and Martin (1983) and maintained that parents from abusive and neglectful families tended to be less responsive, while neglectful parents tended to be less demanding.

Responsiveness involves synchrony whereby infant and caregiver behaviour mutually influence the others' responses; important aspects of responsiveness include: warmth which signifies the parent's emotional demonstration of love; reciprocity which refers to the parent's consideration of the child's feelings and desires, as well as the child's willing involvement and compliance; and attachment, which integrates the attachment patterns outlined earlier in this chapter (Baumrind, 1994; Maccoby & Martin, 1983). Demandingness demonstrates a level of personal investment in the child and involves both disciplining and monitoring of a child's behaviour (Baumrind, 1994). Disciplining and monitoring is conducted by directly confronting the child, though not necessarily coercively (Baumrind, 1994). Demandingness can involve: coercion which focuses on the power of the parent and involves issuing unnecessary commands, threats and promises which can provoke opposition and disobedience; confrontation which can be hostile but can also include friendly confrontation about expectations; monitoring which involves close supervision requires an orderly routine that rarely occurs in a maltreating family environment; inconsistent discipline which is frequently seen in maltreating families, as there is often a lack of clear expectations or defining of responsibilities; and corporal punishment, the impact of which is difficult to determine because of the influence of other factors such as intimacy, consistency and affection (Baumrind, 1994).

Studies which have examined parenting and interaction in abusing and neglectful families have found that parents are often unable to acknowledge the positive contributions their child makes to the parent-child relationship (Bradley & Peters, 1991), are insensitive and unresponsive to their children's feelings (Lyons-Ruth, Connell, & Zoll, 1989), and discourage independence (Trickett & Susman, 1988). Compared to controls, these parents are also more likely to be critical and intrusive, use emotion punitively when interacting with their children, and display fewer comments or gestures to their children which convey reassurance, caring, empathy or praise (Lau et al., 2006). Studies have found that abusive and neglectful parents tend to attribute malicious intentionality to their children (Bauer & Twentyman, 1985), suppress positive emotions such as displays of affection and satisfaction, and use less reasoning with their children in comparison to non-abusing parents (Trickett & Susman, 1988). Valentino et al. (2006) also found that mothers from abusing families displayed fewer attention directing and limit setting

behaviours than did mothers from non-abusive families. Parenting in maltreating families will be explained further in Chapter 7.

3.3.4 Parenting, play and playfulness

While the developmental impact of the family environment and parenting practices are well understood in the literature, very few studies have examined parent behaviours and attitudes towards play and whether this influences a child's playfulness (Van der Poel et al., 1991). Many of the early studies involved observation of a few specific aspects of playfulness without clear conceptualisations of the construct. Playfulness instruments based on clearer conceptualisations subsequently emerged (e.g. studies using Barnett's (1990) Children's Playfulness Scale which was based on Lieberman's (1966) original playfulness instrument). Bishop and Chace (1971) conducted a study on parental attitude and behaviour in nurturing creativity in 72, 3- and 4-year-old children. Playfulness and creativity were assessed by observing the child in a novel play task and coding for complexity and variety of choices used. The authors found that flexibility, exploration, and respect for the child's autonomy in the play environment were aspects that enhanced playfulness. They also considered that restrictive environments could result in children seeking out less novel situations, while those in less restrictive situations may actually be more motivated to seek out novelty. Families in which there are hostile parenting practices with a high degree of coercion could be considered to be restrictive environments, which may result in less novelty-seeking behaviours in children.

Restrictive environments, especially those involving coercion and hostility, would seem to be at odds with mind mindedness. Mind mindedness, the ability to value the child as an individual with unique needs and views, encourages autonomy and child-directed behaviour rather than undermining it. Parenting practices consistent with authoritative parenting thus have some similarities with mind mindedness. In fact, Meins et al. (2013) argued that, if a parent was engaged in a difficult interaction with their child, mind mindedness would make the parent less likely to withdraw or react in a hostile way, demonstrating a capacity to tune into the child's thoughts and feelings to de-escalate a child's reactive or negative behaviour.

Van der Poel et al.'s (1991) study of 22 children from 9 to 12 years of age found that the more playful children tended to have parents who believed in the importance of supporting and providing opportunity for their child's play, and yet also set limits on their own involvement in the child's play. Child playfulness was measured in the study by observing the child's play with a novel object. Van der Poel et al. (1991) also found that the more playful children in their study had parents with characteristics that were consistent with an authoritative parenting style as described by Baumrind (1967), that is, having high demands of the child, firm limit setting coupled with respect for the child's point of view, with high levels of warmth. Authoritative parenting has also been associated with children's social competence and an ability to engage in more complex levels of play than those of their peers (Clawson & Robila, 2001). Children of authoritative parents were found to have greater levels of "instrumental competence", that is, "socially responsible and independent" behaviour (Baumrind, 1970, p. 106). Baumrind (1970) further described these children as friendly to peers, cooperative with adults, achievement-orientated, dominant and purposive.

While Van der Poel et al.'s (1991) finding which linked authoritative parenting to children's playfulness is encouraging, the conceptualisation of playfulness in children was not clear, and not consistent with current conceptualisations of playfulness. Some of the scoring was based on Piaget's (1952) definitions of play which were more focused on cognitive aspects such as exploration and manipulation, with comparatively less focus on imaginative play which seems to be more integral to playfulness. It is clear that parenting practices such as warmth, reasoning, consistency and hostility have a major impact on child developmental outcomes. These parenting practices also potentially have a significant influence on play, with restrictive environments particularly limiting the development of playfulness. This environmental influence on play thus highlights the need to further examine parenting practices and playfulness. Therefore, parenting practices have been incorporated into the model (refer to Figure 3.4), with the following hypotheses:

> *Higher levels of parenting practices such as warmth, reasoning, and consistency will be associated with greater playfulness in preschool children.*

Higher levels of parent hostility will be associated with lower levels of playfulness in preschool children.

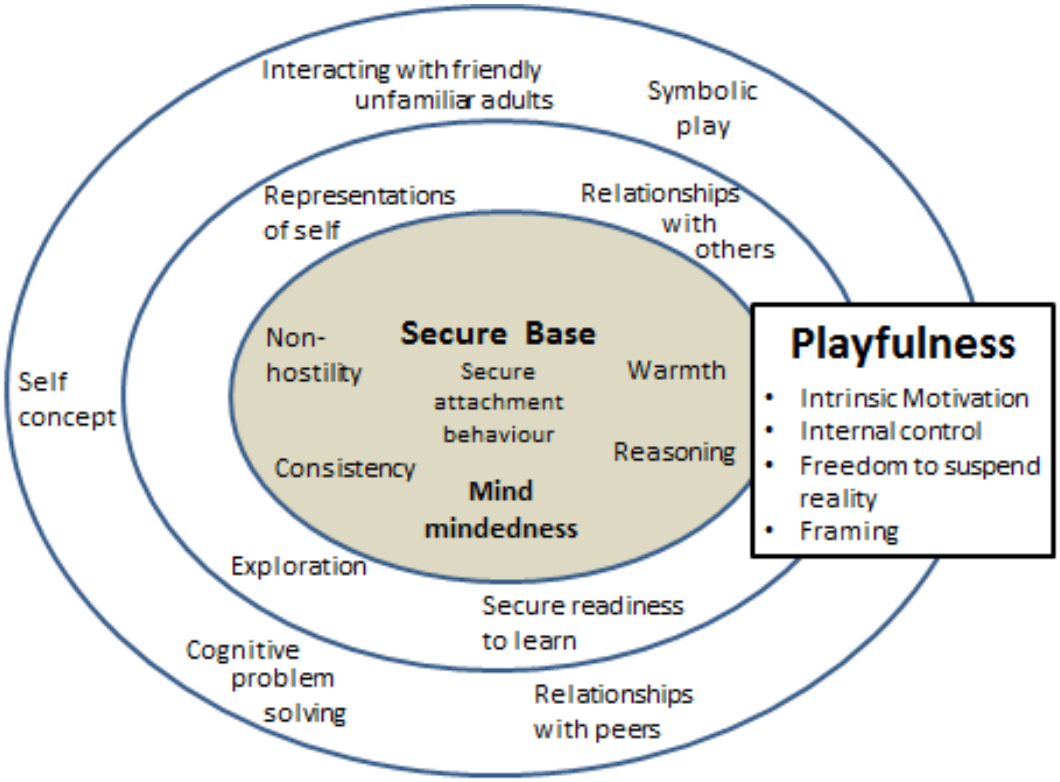


Figure 3.4 Model of attachment, playfulness, mind mindedness and parenting

3.4 Playfulness in adults

In order to promote play in children, it is important to provide an environment that helps the child to move from exploration to actual play, where the child considers what he or she can do with an object rather than just what it does (Skard & Bundy, 2008). The environment needs to provide both opportunities and demands that fit with the child's abilities (Pervin, 1968; Skard & Bundy, 2008). With regard to a child being able to engage in play playfully, in addition to ensuring that the environment provides both appropriate opportunities and demands, it is also important to revisit Bishop and Chace's (1971) concept that a least restrictive environment promotes spontaneity and joy. This raises the question as to whether a playful adult forms part of that least restrictive environment.

Guitard et al. (2005) used a grounded theory approach to develop a better understanding of playfulness in adults. Qualitative data was gathered from 15 participants from 28 to 63 years of age. The themes which emerged from the study included: creativity, curiosity, sense of humour, pleasure, and spontaneity (Guitard et al., 2005). In contrast, Schaefer and Greenberg (1997) considered creativity to be a correlate of playfulness, rather than an integral element of playfulness. Guitard et al. (2005) also noted relationships between various components of playfulness. For example, curiosity inspires creativity, spontaneity facilitates creativity, while both a sense of humour and curiosity contribute to pleasure.

It is often assumed that play is an enjoyable encounter for adults and children; however, the opposite is true in families where play is perceived to be a stressful activity for parents (Fagot & Kavanagh, 1991). If play is perceived to be stressful by parents, then the parent presumably will have more difficulty being an effective play partner as discussed by Rigby and Huggins (2003). This may in turn create an environment which is less likely to nurture playfulness because the child may feel unsafe and ill at-ease. In considering parents as play partners for their children, it is important to consider adult playfulness, a construct that has been examined very little in parents. "Playfulness is an aspect of personality that predisposes individuals to reframe boring situations into more amusing ones for themselves" (Barnett, 2011a, p.382). In fact, a consistent inverse relationship has been found between playfulness and boredom, highlighting an integral aspect of playfulness as the ability to provide stimulation and enjoyment for both oneself and possibly others (Barnett, 2007, 2011a). Guitard et al. (2005) drew attention to the fact that playfulness was seldom studied in relation to adults, and that it was important to consider playfulness in the context of therapy with adults. If playful adults are able to reframe boring situations for themselves, then surely they might also be able to do this for their children.

Few studies can be found which examine the relationship between children's playfulness and adult playfulness. Casas (2003) examined whether there was continuity of the construct from childhood to adulthood. She recruited 36 young adults who had participated in a child playfulness study 15 years earlier, but found no relationship between their playfulness at 4 or 5 years of age and their self-assessed playfulness as a young adult of approximately 20 years of age. There was also no relationship between their child playfulness scores and their adult playfulness, as assessed by their mothers.

Consequently, Casas (2003) found no evidence to support stability of playfulness from childhood to adulthood.

Playfulness in the parenting role has been rarely examined in the playfulness literature (Mitchell, Wright, & Stanley, 2014a). Further, any studies which have examined parenting and playfulness have tended to lack clarity in the operationalisation of playfulness used. For example, an early study by Blehar et al. (1977) found that maternal playfulness as well as maternal ability to shape play in response to her infant's play are strong predictors of security of attachment at 12 months. However, rather than playfulness being a more clearly defined construct as it is today, it was measured by observing mother-child interaction and coding for playful behaviours such as tickling. The parenting research seem to indicate reduced levels of pleasure in adults who have parenting difficulties or disrupted attachments with their children (Baumrind, 1994; Fagot & Kavanagh, 1991). This may, therefore, suggest lower levels of playfulness in these parents, and the consequent need to examine the relationships between these constructs more closely.

3.4.1 The construct of playfulness in adults

Early conceptualisations of adult playfulness were developed and compared with the construct of children's playfulness. For example, Glynn and Webster (1992) compared their conceptualisation with that of Lieberman (1977), and considered that adult playfulness comprised of spontaneity, expressiveness, fun, creativity, and silliness. Schaefer and Greenberg (1997) focused more on the fun aspects of playfulness, including the following aspects in their conceptualisation: fun-loving; sense of humour; silliness; informality; and whimsical.

With the flourishing of the adult playfulness literature in recent years, so the conceptualisation of adult playfulness has become increasingly contested (Proyer, 2012b; Shen, Chick, & Zinn, 2014). Some conceptualisations of adult playfulness have been critiqued because they tend to combine inner psychological constructs such as curiosity and open-mindedness with behavioural expressions of playfulness such as exaggerating, laughing and teasing (Shen et al., 2014).

Proyer (2012b) highlights the dissension in the literature about whether adult playfulness is a uni- or multi-dimensional construct. He points out the complexity of the construct

and that Lieberman's pioneering work was based on a multi-dimensional construct. Mitchell, Wright, and Stanley (2014b) conducted a systematic review of the literature on the conceptualisation of adult playfulness. They also found that current conceptualisations mostly viewed adult playfulness as a multi-dimensional concept (Barnett, 2007; Proyer, 2012b).

Of the more recent conceptualisations of adult playfulness that have emerged, Barnett (2007), based on the use of focus groups of undergraduate students, proposed that it is comprised of four factors: gregarious, uninhibited, comedic and dynamic. Proyer has been a prolific contributor to the adult playfulness literature and, on the basis of a review of 17 playfulness instruments, found evidence of five adult playfulness factors: humorousness; cheerfulness-uninhibitedness; expressiveness; other-directedness; and intellectuality-creativity (Proyer & Jehle, 2013). Further, Proyer and Jehle (2013, p.815) describes the playful adult as "humorous, cheerful, uninhibited, expressive, caring for others and enjoying intellectually challenging and creative things". Proyer (2012b) argued that current conceptualisations of adult playfulness only covered aspects of playfulness rather than the full range of the construct. He considered many conceptualisations of adult playfulness portrayed the flippant, childlike aspects and neglected to include the intellectual and social competence elements (e.g. verbal fluency, being charming and witty, and being loving) which emerged in his psycho-linguistic analysis of playfulness. From this corpus analysis of adult playfulness, he considers there are seven dimensions: cheerful-engaged, whimsical, impulsive, intellectual-charming, imaginative, light-hearted, and kind-loving. Shen et al. (2014) on the other hand, argued that adult playfulness has an overarching playfulness dimension, but also comprised of three factors: fun-seeking/motivation, uninhibitedness, and spontaneity.

3.4.2 The benefits of adult playfulness

There was little literature pertaining to playfulness in adults until recently, and earlier studies tended to examine playfulness in the context of coping at work or amongst university students (Guitard et al., 2005). There has been a recent burgeoning of adult playfulness literature, particularly in the area of measurement and conceptualisation of the construct (e.g. Barnett, 2011a; Proyer & Jehle, 2013; Proyer, 2014; Shen et al., 2014). Playfulness in adults may be different to that in children, with social manifestations of

playfulness changing over time because of the need to display socially acceptable behaviour (Lieberman, 1977). Playfulness is considered to be an important attribute into adulthood because it helps adults to cope with everyday life (Solnit, 1998). Playfulness is viewed as being important for facilitating a person's occupational performance and nurturing health and well-being (Guitard et al., 2005). Hence, playfulness is considered a valuable asset to occupational therapy intervention because it "allows adults to approach activities with the same openness of mind with which the child approaches play" (Guitard et al., 2005, p. 19).

While causal mechanisms have not yet been established, playfulness has been associated with stress reduction and coping strategies (Barnett, 2011a; Qian & Yarnal, 2011). Playful people are more likely to use coping strategies more readily than non-playful individuals, and playful people also tend to find fewer situations in life to be stressful (Magnuson & Barnett, 2013). Further, playful people, when compared with less playful people in stressful situations, tend to use more active coping strategies, readily seek support from others, positively reframe a situation, and are able to accept the reality of a situation. Playful people also seem better able to cope with less structured environments than do less playful people (Proyer, 2012c). Playful adolescents and young adults display higher levels of self-confidence and have greater positive perceptions of their health and fitness than their less playful counterparts (Staempfli, 2007). They also tend to participate more in leisure activities and experience greater satisfaction with their leisure engagement (Staempfli, 2007).

Proyer (2012a) found that playful people had higher self-estimates of their ingenuity than did less playful people, that is, they demonstrated awareness of their creative potential and capacity to conceive new ideas. Playfulness has also been associated with healthy aging (Yarnal & Qian, 2011) and the 'fun' aspects of playfulness seem related to well-being (Proyer, 2012a). While playfulness seemed to be independent of intelligence, it has been associated with academic achievement, with suggestions that playful people seemed to enjoy doing the work needed to do well on exams (Proyer, 2011).

As discussed previously, very few studies of parent playfulness exist. Blehar et al. (1977) investigated parent playfulness as measured by coding parent-child interactions. They found a tendency for playful parents to have children who were securely attached,

however, this relationship failed to reach significance. Therefore, one further benefit of adult playfulness could potentially be a secure attachment, but this is yet to be substantiated. It would also seem that adult playfulness could benefit the parenting role because of the associations found with stress reduction, as well as active coping strategies (Magnuson & Barnett, 2013).

As the playfulness literature continues to grow, there are increasing efforts to examine and conceptualise playfulness in different populations, for example, adolescents (Staempfli, 2007) and older adults (Yarnal & Qian, 2011). However, there still appears to be little available literature on the relationship between child playfulness and adult playfulness. Mitchell et al. (2014a) examined parent perceptions of playfulness as a way to start addressing the gap in the literature relating to parent playfulness. Further, Gordon (2014) proposes that a genetic disposition interacts with life experience in early childhood to facilitate playfulness. Consequently, the need to examine this research gap in relation to parent playfulness is even more pressing, particularly when considering the role that parent playfulness may have in a child's early life experiences. Therefore, examination of the association between adult playfulness and child playfulness is a worthy investigation. Hence, adult playfulness has been added to complete the model, as shown in Figure 3.5 Integrated model of playfulness. The final hypothesis for study 2 is:

> *Higher levels of parental playfulness will be associated with higher levels of playfulness in preschool children.*

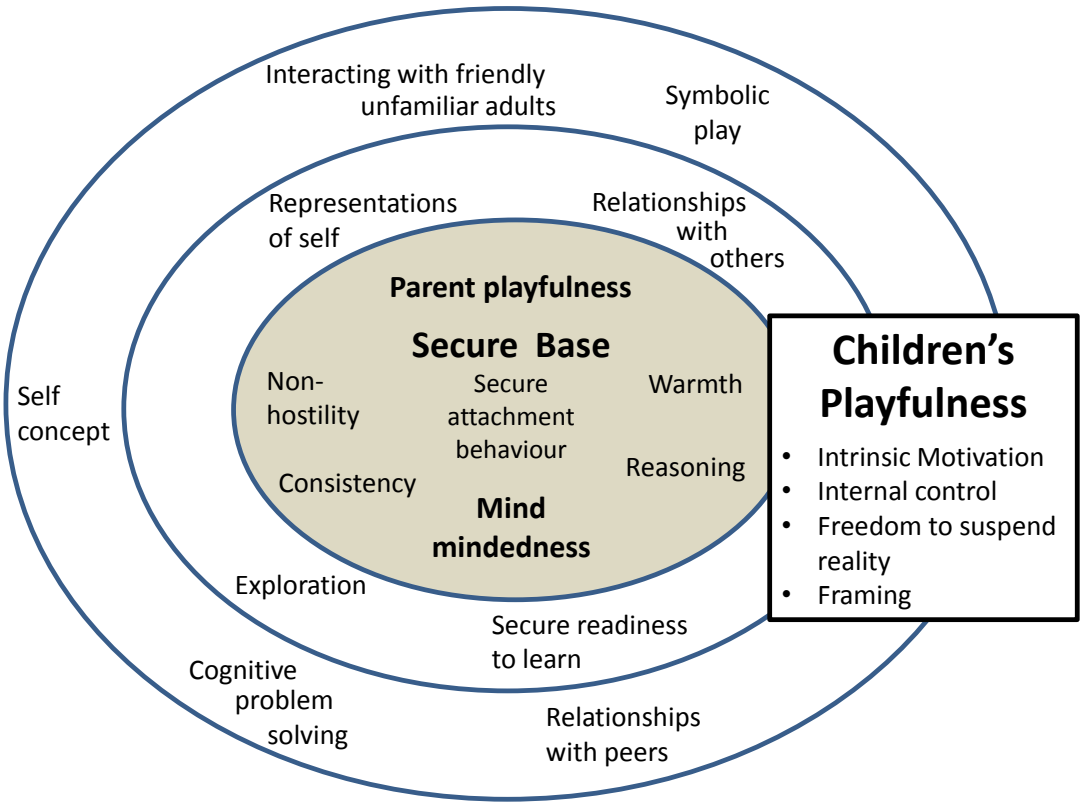


Figure 3.5 Integrated model of playfulness

3.5 Summary

This chapter provides a description of important familial elements that provide an important context for the development of young children. These include: the early attachment relationship, mind mindedness, parenting practices and parent playfulness. Each of these elements of the family context have been associated with play in the literature. However, there has been little examination of these specific aspects in relation to children's playfulness, particularly using studies which use a clear conceptualisation of playfulness. Attachment theory forms the basis of a model which has been used to examine whether relationships exist between children's playfulness and these child and parent characteristics. The next chapter will describe the method used in study 1 and 2.

CHAPTER 4 - STUDY ONE AND TWO: METHOD

The method for phase one of this research (study 1 and 2) is described in this chapter. The research aims and hypotheses for study 1 and 2 are presented here again in one place to provide clarity. In addition to the aims and hypotheses, a single question is also used to address one of the study 1 aims, as it is exploratory in nature. These two studies were implemented concurrently and so are presented together. The remainder of the chapter will discuss the measures used, the procedures for both studies, ethical issues, analysis undertaken and the preliminary analysis of the data.

Study 1 –

The aim of study 1 is to examine levels of playfulness in Australian preschool age children.

Question 1: What is the level of playfulness of preschool children in metropolitan Adelaide?

A second aim of study 1 is to determine whether a range of demographic and developmental child and family characteristics are related to children's playfulness in metropolitan Adelaide.

Hypothesis 1: Decreasing parent age will be related to increasing playfulness in preschool children from metropolitan Adelaide.

Hypothesis 2: Increasing socioeconomic status will be related to increasing playfulness in preschool children from metropolitan Adelaide.

Hypothesis 3: Children's age will be positively associated with playfulness in preschool children from metropolitan Adelaide

Hypothesis 4: Children rated as having competent developmental skills by their preschool teachers (in their approach to learning, socioemotional development, gross and fine motor skills, and receptive and expressive language) will be more playful than children rated as less competent.

Hypothesis 5: Preschool aged boys will have significantly higher playfulness scores than preschool aged girls from metropolitan Adelaide.

Study 2 –

The aim of study 2 is to determine to what extent aspects of the family caregiving environment explored in Chapter 3 (the attachment relationship, mind mindedness, parenting practices and parent playfulness) are related to children's playfulness. This study will therefore test the *Integrated model of playfulness* presented in Chapter 3.

Hypothesis 6: Children identified as having lower levels of attachment behaviour problems will have greater levels of playfulness than those identified as having higher levels of attachment behaviour problems.

Hypothesis 7: Increasing levels of parent mind mindedness will be associated with greater playfulness in preschool children.

Hypothesis 8: Higher levels of parenting practices such as warmth, reasoning, and consistency will be associated with greater playfulness in preschool children.

Hypothesis 9: Higher levels of parent hostility will be associated with lower levels of playfulness in preschool children.

Hypothesis 10: Higher levels of parental playfulness will be associated with higher levels of playfulness in preschool children.

4.1 Research design

The studies described in this chapter are the first two of three studies (phase 1) in this thesis investigating playfulness in preschool children. Studies one and two employ a mixed methods, multi-informant, observational cross sectional design and examine playfulness in preschool children from metropolitan Adelaide and potential predictors of playfulness in children within the general preschool population, as recruited through the Department of Education and Children's Services (DECS) in South Australia.

4.2 Method

Recruitment and data collection for studies 1 and 2 occurred concurrently. Ethics approval was gained from the University of South Australia's Human Research Ethics Committee (see appendix 1). Permission was also granted from the Department of Education and Children's Services (DECS: Community and Tertiary Liaison) in order to conduct the study in DECS facilities (see appendix 2).

4.2.1 Participants

One hundred and twenty-seven preschool children and their parents/caregivers were recruited through DECS preschools for studies 1 and 2[1]. The sample size of 127 enabled detection of correlations approaching the moderate range according to Cohen's convention (Cohen, 1988). Based on a sample size of 127 and power of 0.80, a correlation of 0.25 could be detected if using an alpha of .05, or a correlation of 0.3 if using an alpha of .01 (Division of Biomathematics/Biostatistics).

Preschool children without any known significant disabilities (e.g. physical and intellectual disabilities, autism spectrum disorder) or significant developmental delays were recruited for the study. Children with disabilities were excluded from the study because of the potential impact of disability on playfulness. However, while children with disabilities were not knowingly recruited, some children with chronic health conditions or delays became evident during the data collection process, for example, a child with juvenile rheumatoid arthritis, two with asthma, and a child with a language based disorder. However, children with health conditions and developmental delays were retained in the study if they were not identified by the preschool teacher as having a disability or if that disability did not impact on that area of development to the extent that the child was 'much less competent than peers' in that area (refer to section 4.3.3.1). The study was conducted in English, therefore non-English speakers were excluded from the study

[1] DECS preschools have varying titles such as preschool, kindergarten, child parent centre etc, depending on the location and function of the centre. For example, preschools are attached to primary schools and kindergartens are generally free standing. For the purposes of this paper, the term preschool will be used to describe all of these centres in order to facilitate clarity for the reader.

because of difficulty completing questionnaires and understanding information sheets written in English.

The sample comprised preschool children who were either 4 years old or those who had recently turned 5 years (maximum of 62 months). Of the 127 children recruited, two did not meet the eligibility criteria and were invited to participate in study three which will be described in Chapter 7. Two further families withdrew from the study bringing the total number of participants for study 1 and 2 to 123, however playfulness data was available on 122 of these participants because one child was not able to attend their play session[2]. During the Rasch analysis conducted in order to obtain participants' total playfulness scores (refer to sections 4.6.1 and 5.3.2), 4 participants were also removed from the analysis because of misfitting scores, thus bringing the final number of participants for study 1 to 118. All 122 participants and their families were included in study 2, with the playfulness data treated as missing for these 4 children.

4.3 Instruments

The measurement instruments for study 1 and 2 were selected to decrease the likelihood of common method variance, to reduce burden on teachers, parents and children, and to maximise reliability and validity. The assessments were administered through a range of methods so as to balance the time commitment involved for participants and their families. The types of measurement used in each of the studies are:

Study 1: Gathering of demographic information, developmental status, and assessment of playfulness.

Study 2: Gathering of demographic information, measurement of parenting practices, adult playfulness, parent mind mindedness, children's playfulness and attachment behaviour.

[2] It should be noted that, in order to obtain the Test of Playfulness scores (Bundy, 2004), Rasch analysis was conducted using the Winsteps program, Version 3.75.0 (Linacre, 2012) on the data for the children in study 1, 2 and 3 (N= 127).

4.3.1 Measures conducted with parents

4.3.1.1 Parenting practices

Parenting practices (refer to appendix 3 of the *Preschool Playfulness Booklet* for parents) were measured using the parenting questionnaire used in the K cohort, wave 1 in the Longitudinal Study of Australian Children (LSAC), developed by the Australian Institute of Family Studies (AIFS) (Gray & Sanson, 2005). The LSAC parenting questionnaire measures warmth, consistency, hostility and inductive reasoning, with the items gathered from valid and reliable parenting measures such as the Child Rearing Questionnaire developed by Paterson and Sanson (1999), and from the Canadian National Longitudinal Survey of Children and Youth. Parents complete the scale and rate each of the 18 items on a five-point likert scale, with each item scored as: never/almost never, rarely, sometimes, often, and always/almost always.

It is brief to administer, and there is data available (means and standard deviations) on an Australian sample of nearly 5000 children. A study by Cussen, Sciberras, Ukoumunne, and Efron (2012) found internal consistencies for the following scales were good to very good: parental warmth (α=0.88), consistency (α=0.71), hostility (α=0.70), and inductive reasoning (α=0.81).

4.3.1.2 Playfulness Scale for Adults

The Playfulness Scale for Adults (Schaefer & Greenberg, 1997) was used to measure parental playfulness and measures a general predisposition to play (see appendix 4 of the *Preschool Playfulness Booklet* for parents). The 35 item scale has high internal consistency with an alpha of .90, and a factor analysis by the authors generated five factors, including (1) fun-loving, (2) sense of humour, (3) enjoys silliness, (4) informal, and (5) whimsical. Despite having five discrete factors, the scale is treated uni-dimensionally and scored with a total score because of the high internal consistency (Proyer, 2012b; Schaefer & Greenberg, 1997). Construct validity has been established with a correlation of .62 with the Multidimensional Sense of Humour Scale (Thorson & Powell, 1993) and Fix and Schaefer (2005) reported good construct validity when compared with the Adult Playfulness Scale by Glynn and Webster (1992). The test retest reliability of the scale is

.89, with a split half reliability of .87 (Spearman-Brown) and .86 (Guttman) (Fix & Schaefer, 2005).

Limited measures of adult playfulness were available until recently. Consequently, Schaefer and Greenberg's (1997) conceptualisation of playfulness was used in this study, as it was one of the most robust available at the time. Schaefer and Greenberg (1997) considered that playfulness comprised many 'fun' related components such as pleasure and sense of humour. During the developmental process of their instrument, the Playfulness Scale for Adults (Schaefer & Greenberg, 1997), the authors provided support for the internal consistency and construct validity of the measure. Another major conceptualisation of playfulness from a similar era was that of the Adult Playfulness Scale by Glynn and Webster (1992), and their instrument included five components: spontaneous, expressive, fun, creative and silly. However, their conceptualisation has been critiqued because of their assumption that play is the antithesis of work, and that it is erroneous to set an artificial boundary between work and play (Barnett, 2007; Shen et al., 2014). In her later study, Barnett (2007) found that lack of seriousness was not part of the playfulness construct, as had been conceptualised by Glynn and Webster (1992). Further, in examining the Adult Playfulness Scale, Schaefer and Greenberg (1997) considered that factors such as creativity may be more correlates of play, rather than core components.

Several adult playfulness instruments have emerged in recent years (Barnett, 2007; Proyer, 2012b; Proyer, 2012c; Shen et al., 2014), but were either not available or inappropriate for use in the current study. Proyer (2012c) has developed a brief, global measure of adult playfulness (Short Measure for Adult Playfulness [SMAP]) that may be useful as a screening instrument or in studies where multiple variables are being investigated. Shen et al. (2014) has developed a multi-dimensional measure, the Adult Playfulness Trait Scale (APTS), which also has a composite uni-dimensional score. Finally, Barnett (2007) developed the Playfulness Scale for Young Adults which is specifically targeted at young adults, and therefore inappropriate when a broader age range is required, as in the current study.

It should be noted that while some of the items on the Playfulness Scale for Adults (Schaefer & Greenberg, 1997) contain American language and relate to the American

context, piloting of the measure prior to study 1 occurred in order to seek feedback regarding the items, and particularly those that the respondents did not relate to or found difficult to understand. Relatively minor changes were made to the instrument to retain the psychometric properties. Of the 35 items, five were examined as being potentially difficult for participants to answer based on situational context (e.g. items 4, 24, 25, 26 and 27). Based on feedback during the pilot testing of the form, only two items were changed in order to ensure that the items were more appropriate to both the Australian and the generational context. The changes involved firstly changing item 27 by removing a reference to a 'Three Stooges' movie and changing it to a Jim Carey movie; and secondly, changing item 4 to 'I would like an indoor basketball hoop' instead of referring to a nerf basketball hoop, with which everyone might not be familiar. The final score was calculated on the basis of the recommendation by Schaefer and Greenberg (1997) of a total score based on the sum of 28 items, with deletion of the items that did not load onto any factor in the original factor analysis (items 6, 8, 11, 16, 26, 27, and 28). Scoring for the current study was conducted according to the procedure recommended by Schaefer and Greenberg (1997) which involves the summation of the 28 items.

4.3.1.3 Demographic questionnaire

Parents were asked to complete a brief demographic questionnaire (refer to appendix 5) in order to gather information about child and family characteristics. The type of information gathered included: child age, gender and place in family; family constitution including any shared parenting arrangements; significant events or health issues that might impact on children's playfulness; parent ages, occupations and ethnicities; and family income. Parents were also asked whether there had been any involvement with Families SA, the statutory child protection organisation in South Australia.

4.3.1.4 Mind mindedness measure

Parental mind mindedness was measured through a single open question technique developed by Meins et al. (1998). Parents are asked, '*Can you describe [child's name] for me?'* (Meins & Fernyhough, 2006) to assess a parent's inclination to describe their children in characteristics relating to their individual mental state and preferences. The interview was audiotaped with permission, transcribed and coded by the researcher. The

coding is based on whether each comment is reflective of (1) the child's mental life, (2) behavioural aspects, (3) physical attributes, and (4) general characteristics (such as being a 'lovely boy'). A total mind mindedness score was calculated in SPSS by dividing the number of mental characteristics by the total number of attributes used to describe the child. This method of calculation controls for some parents being more verbose than others. The intent of the assessment is to obtain a spontaneous description of the child, and the emphasis is on obtaining a final score rather than using verbatim comments made by the respondents. Previous research indicated that inter-rater agreement between coders was good at K = 0.92 (Lok & McMahon, 2006). The intra-class correlation for the current study was .75, and is reported in Chapter 5. Predictive validity was supported by comparing maternal mind mindedness when an infant was 6 months of age (as assessed using analysis of maternal behaviour and vocal descriptions of her infant) with maternal mind mindedness as assessed when the child was 48 months (using a maternal interview involving descriptions of her child) (Meins et al., 2003).

4.3.2 Measures conducted with children

4.3.2.1 Test of Playfulness

The ToP (Bundy, 2004) is an observational rating scale, developed to measure playfulness in children from infancy through to adolescence (see appendix 6). It consists of 31 items which are scored on a four-point scale (0 to 3) by the rater. However, there is some variability between studies as to how many total number of items on the ToP are reported, depending on their relative fit with the Rasch model (Bundy, 2005; Cordier, Bundy, Hocking, & Einfeld, 2010c). The ToP is conducted in an environment that supports play; in order to facilitate play that is spontaneous and intrinsically motivated, it is important that the child feels both physically and emotionally safe (Bundy, 2004).

Being a rating scale assessment, the ToP incorporates the opinion of the observer as part of the instrument (Brentnall et al., 2008). On the basis of an observation of free-play, usually on video, the rater scores each item on a four-point scale as: almost always (3), much of the time (2), some of the time (1), rarely or never (0), or not applicable (NA). Very specific instructions are available in the manual as to the criteria for each level

(Bundy, 2004). A total scaled score is calculated using Rasch analysis because it converts ordinal scores into true equal-interval measures that are common to both persons and items (Duncan et al., 2003). The calculated Rasch scores for person performance are computed on the basis of a default mean of zero for item difficulty, with more playful participants receiving a score on the positive side of zero and less playful participants receiving a score on the negative side of zero (Linacre, personal communication, July 23, 2015).

The assessment was initially conducted through two observations (indoor and outdoor), each of 15 minutes duration. Studies have been conducted using different lengths of observations, ranging from 15 to 30 minutes. However, a study by Brentnall et al. (2008) found that 15 minutes was optimal because no new information was obtained on participants beyond that time. Early in the data collection, the protocol was amended to collect data from one observational session to ensure consistency (refer to procedures in section 4.4).

Reliability of the ToP is supported by data from 95% of 300 raters demonstrating goodness of fit to the Rasch model (Bundy, 2005; Skard & Bundy, 2008). Test-retest reliability is moderate (ICC = .67, $p<.01$) (Brentnall et al., 2008). The ToP has high internal consistency. Inter-rater reliability is good to excellent, with Fabrizi (2014) reporting Cronbach's alpha for each of the ToP items ranging from .75 to .94.

Convergent validity has been established through a moderate correlation of 0.46 with version 3 of the Children's Playfulness Scale (Barnett, 1990), with some of the differences explainable by the differences in the conceptualisation of playfulness. Construct validity has been established using Rasch analysis, with 28 of 29 items conforming to expectations of the measurement model (Bundy, 2005), and with 93% to 96% of items and 93% to 98% of people reported as fitting with expectations of the Rasch model (Bundy et al., 2001; Skard & Bundy, 2008). In order to improve reliability of the manner in which the instrument was administered, the researcher was trained in the administration and scoring of the ToP at the University of Sydney in 2008. Further, a calibrated rater was used for scoring; the rater had previously been calibrated by comparing the rater's scores with those of many other raters of a large ToP sample of more than 3000 observations (Cordier et al., 2010b).

4.3.3 Measures conducted with preschool/kindergarten teachers

The teacher questionnaire (refer to appendix 7) consisted of some demographic questions relating to length of time at preschool as well as number of sessions per week attended, to ensure that sufficient information was collected in order to explain outliers or differences in levels of playfulness. Further, the teacher perspective on whether the child had a disability was sought as a double check for the inclusion criteria. The remainder of the teacher questionnaire comprised the Brief Developmental Checklist (refer to section 4.3.3.1) and the Attachment Disorder Checklist (section 4.3.3.2).

4.3.3.1 Brief Developmental Checklist

This short checklist was used to gather information about whether the child had any known disabilities or developmental difficulties as these may impact on playfulness (refer to appendix 7). The developmental questions were taken from the teacher questionnaire used in wave 1 of the Longitudinal Study of Australian Children (AIFS, 2006). Teachers completed a checklist of six items about the child's development, and the items included: social emotional development (e.g. adaptability, co-operation, responsibility, self-control); approaches to learning (e.g. attention, observation, organisation, problem solving); gross motor skills; fine motor skills; receptive language; and expressive language. For each item, teachers rated children as: more competent than others of a similar age, as competent as others, less competent than others or much less competent than others.

While there was no available information on the psychometric properties of the Brief Developmental Checklist, it should be noted that the item scores were not collated into a total score. Instead, the item scores were used individually to determine whether teachers considered there to be any developmental concerns in each of the areas: socioemotional, approach to learning, fine motor, gross motor, receptive language and expressive language. The data provided from the Brief Developmental Checklist is categorical, and categories were collapsed into meaningful categories (competent/more competent and less competent/much less competent).

4.3.3.2 Attachment Disorder Checklist

The Attachment Disorder Checklist (ADC) (appendix 8) is based on the classifications listed for the disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)

(American Psychiatric Association, 1994) and includes attachment-related behaviours and characteristics. It was developed and used in a study by Osborne and Delfabbro (2006) of 364 children who were in out-of-home care in four Australian states. After an extensive review of the literature for measures of attachment behaviours in preschool children, the ADC was selected as a brief and reliable means to assess attachment behaviour.

While the ADC collects information on both behaviours and intentionality of actions, these aspects of intentionality are integral indicators of attachment difficulties. For example, provoking anger is a form of attention seeking sometimes seen in children with attachment problems, and their tendency to provoke anger in others also serves to confirm their negative view of themselves in relationships with others (Osborne & Delfabbro, 2006). Therefore, requesting teachers to record perception of the deliberateness of the children's actions is important.

The ADC comprises 10 items that are rated on a four-point scale and result in a total score between 10 and 40. Children with scores higher than 25 are significantly more likely to display difficulties in behavioural and emotional functioning as measured on the Strengths and Difficulties Questionnaire (Goodman, 1997), thus supporting the concurrent validity of the ADC. Internal consistency of the checklist as measured by Cronbach's alpha for the scale has been established as acceptable at 0.68.

4.4 Procedures

The parent booklet (containing the demographic questionnaire [appendix 5], the Playfulness Scale for Adults (Schaefer & Greenberg, 1997) [appendix 4] and a parenting questionnaire [appendix 3] was piloted with four parents of 4-year-old children using a convenience sample in order to ascertain the user-friendliness of the form. Formatting changes and minor modifications to instructions were made on the basis of feedback in order to increase clarity of the form. This sample was used only for pilot testing the parent booklet, and was not included in studies 1, 2 or 3.

4.4.1 Preschool selection

Children were recruited from 21 DECS kindergartens and preschools within the Adelaide metropolitan area. A list of metropolitan preschools was downloaded from the DECS website in alphabetical order according to regions. At the time of recruitment there were 202 preschools in eight metropolitan regions, including Inner South, Metro West, South West, East, North East, Wallace, Salisbury, and Kumangka Para (Department of Education and Children's Services, 2007). A random sample of preschools from metropolitan Adelaide was produced by generating a random selection of numbers using Random.org (2008). This random sequence of numbers was then used to allocate preschools.

In order to recruit children from a range of socioeconomic areas, the relevant Socio-Economic Indexes for Areas (SEIFA) scores from the Australian Bureau of Statistics (ABS) (2011a) were recorded for each preschool. Socio-economic indexes for areas scores fall on a continuum of advantage (high scores) to disadvantage (low scores). Each Australian suburb or collection of suburbs is known as a collection district and is allocated a SEIFA score where the mean is 1000 with a standard deviation of 100. Seventy-four percent of collection districts lie within 1 standard deviation of the mean (i.e. between 900 to 1100). Collection districts are also allocated a decile score, where each decile (from 1 to 10) represents 10 per cent of the population. The suburban location of each preschool was identified as being at the advantaged end (i.e. decile score of 8-10, representing the highest 30 per cent of locations with socioeconomic advantage), disadvantaged end (i.e. decile score of 1-3, representing 30 per cent of locations with the greatest disadvantage) or in the middle of the continuum (i.e. decile score of 4-7, representing the middle 40 per cent of socioeconomic areas). The aim was to recruit the study sample from each of the three areas of the continuum. Because of the differential response rate from families at different centres (refer to Table 4.1), preschools in the lower deciles were targeted for inclusion. Table 4.1 outlines the SEIFA scores and response rates for each of the participating preschools. Because of the difficulties in recruiting from lower SES areas, three preschools were approached again and agreed to participate in a second round of recruitment. The response rate from families in preschools at the disadvantaged end of the spectrum (i.e. decile score of 1-3) was much lower (10%) than the response rate for preschools at the advantaged end (i.e. decile 8-10) which was 23 per cent. The average response rate per preschool was 14 per cent.

Table 4.1 Response rates from preschool recruitment

Preschool No.*	SEIFA score	SEIFA Decile	No. packages†	No. participants	Response rate for each preschool
1	788	1	50	8	16.00%
2	1092	9	45	7	15.56%
3	903	2	95	10	10.53%
4	980	6	45	9	20%
5	998	7	45	4	8.89%
6	832	1	13	1	7.69%
7	848	1	35	3	8.57%
8	1037	8	70	17	24.29%
9	980	6	38	8	21.05%
10	807	1	15	2	13.33%
11	874	1	35	1	2.86%
12	940	4	33	6	18.18%
13	940	4	42	6	14.29%
14	940	4	27	2	7.41%
15	1106	10	65	17	26.15%
16	885	1	12	1	8.33%
17	942	4	35	4	11.43%
18	848	1	13	1	7.69%
19	938	4	60	6	10%
20	942	4	50	9	18%
21	933	4	70	4	5.71%
TOTAL			893	126*	14.2

* An extra family volunteered for the study outside of the formal recruitment strategy, so this participant and the preschool involved in data collection are not included in this table. Refer to section 4.4.2 for explanation.

†Number of packages distributed by each preschool.

4.4.2 Recruitment

Directors of the identified preschools were contacted by telephone and asked whether they were able to assist with recruitment. Of the 33 preschools approached, 21 agreed (64%) to be involved with recruitment and data collection. One hundred and twenty six participants were recruited through this planned strategy. One further family volunteered while the researcher was collecting data for study 3: the participant's preschool was involved in data collection only and not in recruitment. Hence, this preschool has not been included in Table 4.1, and neither has the additional participant (Total n=127). Of those preschool directors who declined to participate, the most common reason cited was that of having other commitments. Once preschool directors had indicated an interest in the study, they were sent an information letter for teachers (see appendix 9), and this was followed by a visit to the preschool to describe the study in more detail and to deliver recruitment packages for parents. Where possible, parents were informed of the study through the preschool newsletter (recruitment information which was included in the newsletter is included in appendix 10). Preschool directors then provided families of eligible children with an information sheet (appendix 11) and a consent form (appendix 12) via their preschool pigeon hole.

A video consent form (appendix 13) was also disseminated for families to consent to their child being videotaped as a co-player alongside participant children, regardless of whether they chose to participate in the study or not. Families were provided the opportunity of returning the signed consent form and/or the signed video consent form to the researcher in the reply paid envelope provided, although many chose to return them directly to the preschool director.

The researcher telephoned a parent/caregiver to make a suitable appointment time at the preschool. Families were also offered the opportunity to seek more information in person from the researcher. Informed consent was confirmed with each participating parent at the interview. The information sheet identified that a decision not to participate in the study would not impact on their child's preschool program. Parents were informed on the information sheet that participation in the study was completely voluntary and that they could withdraw at any time.

4.4.3 Administration of research instruments

After consenting to participate in the study, parents were telephoned and invited to attend an interview at their child's preschool. Appointment times were generally made at around preschool drop off or pick up times so as not to cause too much inconvenience to the family. Prior to the interview, parents were sent a booklet containing a demographic questionnaire, the Playfulness Scale for Adults, and a parenting questionnaire via the preschool director. Parents were asked to return the booklet when they came for the interview, and they were also asked to inform their child that the researcher would be visiting the preschool and would be videotaping the child's play. The parenting booklet contained self-report questionnaires, so the location in which the parent completed the booklet should not impact, unless the person had difficulties completing, and this was always checked at interview. It was important for parents to receive the questionnaire prior to the interview in order to assist the response rate and to ensure that information from parents was collected chronologically at the same time as the playfulness observations. For example, if parents were provided an opportunity to take their questionnaires home from the interview, the reliability of the data might have been affected by a time lag between the interview date and return of the questionnaire. The process followed also ensured that busy parents did not have to remain at the preschool for longer than necessary.

The interviews with the parent generally took 5-15 minutes, although some were longer if parents had queries or wanted to talk at length about their child. Prior to the interview, parents were informed about the researcher's statutory mandatory notification obligations that apply to all people who have contact with children in a formal capacity in South Australia. During the interview, informed consent was confirmed in person, the mind mindedness question was administered and audiotaped with consent, and parents were also provided the opportunity to discuss queries regarding both the completed questionnaires and the ToP (Bundy, 2004), so that they were aware of what the observation of their child would involve. Some parents did not bring their completed booklet to the interview or had not had time to complete it prior to the interview. The researcher asked whether they had any queries about the questions, and, in the case of those who had not yet completed it, offered for them to telephone if they had any questions. They were provided a reply-paid envelope in which to return the parent

booklet. Most parents returned the questionnaire within two weeks, and telephone prompting was necessary at times. Questionnaires returned later than two weeks after the play observation session were not used in the study.

The ToP (Bundy, 2004) was then conducted with each child at the preschool. The researcher arrived at each preschool early in the preschool session, and often there was a formal group time in which the preschool director or teacher would introduce the researcher to the children. Then, prior to each individual child being videotaped, the researcher introduced herself to the child and co-players in the interactions, explained the purpose of the videotaping (because the researcher was interested in children's play), and encouraged the child to just play as they normally would at preschool. The researcher videotaped the play session as unobtrusively as possible and generally did not engage with the children during the session with two exceptions: either children needed to be reminded to pretend the researcher was not there, or limit setting was required if safety was at risk and no preschool staff were nearby. Initially the children were videotaped for two 15 minute observations, one indoor and one outdoor. However, early in the data gathering process it became evident that it was logistically difficult to gather both observations in a consistent way on the same day, mainly because of differences in the preschool routines. Therefore, a decision was made to conduct one outdoor observation on each child to minimise disruption at each preschool, and it was logistically easier to conduct naturalistic observations in the outdoor setting.

Preschool teachers were asked to complete a Brief Developmental Checklist and the ADC (Osborne & Delfabbro, 2006) at a time convenient to them, preferably on the same day as the child's assessment. The majority of directors provided the completed questionnaires either prior to or at the researcher's last visit to the preschool or posted it in a reply-paid envelope within two weeks.

Once data gathering was complete, the videotapes were sent for scoring to an independent rater who had been trained and calibrated in scoring the ToP (Skard & Bundy, 2008). The rater also signed a confidentiality agreement prior to rating the videos (see appendix 14). The calibration process undergone by the rater facilitated rating consistency when the rater's scores were compared with a larger sample of more than 3000 observations (Cordier et al., 2010c).

4.5 Ethical considerations

Participants' privacy was protected by transcribing the audiotapes of the mind mindedness interview question without inclusion of any identifying information. Transcripts and other assessments (questionnaires, demographic information and score sheets) were de-identified and allocated a code number to facilitate data analysis and interpretation. The list of names and corresponding code numbers were stored separately from identifying information in a locked filing cabinet in the researcher's office at the University of South Australia. Participants were informed about measures adopted to protect their confidentiality both in data storage and in any publications arising from the study. Audiotapes, videotapes, transcripts and questionnaires are stored in separate drawers within locked filing cabinets in the researcher's office in the School of Health Sciences at the University of South Australia (electronic data is on an external hard drive). The data will be kept for a period of seven years to comply with ethical requirements and the Australian Freedom of Information legislation.

Referral information regarding appropriate parenting resources which were free and readily available (refer to appendix 15) such as Parenting SA and the Parent Helpline, was given to all parents. Parents were also offered the opportunity of contacting the researcher's supervisor (Professor Fiona Arney) if they experienced distress or had any questions about the study.

4.6 Analysis

All data were entered twice into SPSS (SPSS Inc., 2008) to ensure accuracy, as it results in a double set of complete data that is exactly the same. Once the correct entry of data is confirmed, duplicates are then deleted. The analysis for each of the research aims is presented below.

4.6.1 First aim of study 1: to examine levels of playfulness in Australian preschool age children.

Prior to conducting further analysis, in order to obtain ToP total scores, the ToP raw scores for participants in studies 1 (n=122) and 3 (n=5) were subjected to Rasch analysis

using the Winsteps program, Version 3.75.0 (Linacre, 2012). Rasch analysis is the recommended approach for scoring the ToP (Bundy, 2004). The use of Rasch analysis enables the conversion of raw item scores into a single interval score that can be used in further analyses (Cordier et al., 2010a). Rasch analysis also assists the researcher to ensure that the playfulness construct being measured is unidimensional, as well as providing an indication of both the relative difficulty of test items and the relative playfulness of individuals (Bond & Fox, 2007; Cordier et al. 2010a). The use of Rasch modelling provides psychometric information that cannot be attained through traditional analyses and may be considered to be a refinement of traditional test theory (Andrich & Styles, 2004; Duncan et al., 2003). Because Rasch analysis orders items hierarchically, the relative position of the items helps to define the scale and consequently dictates whether a person has more or less of a construct (Andrich & Styles, 2004 p.7).

It is generally accepted that, in relation to sample size for Rasch modelling, there should be 10 participants for each category of the rating scale of the test (Linacre, 2002; Wallen, Bundy, Pont, & Ziviani, 2009). The ToP (Bundy, 2004), having a 4-point rating scale (0, 1, 2, 3) then requires a sample size of at least 40 participants in order to conduct Rasch modelling, so the current sample size was more than sufficient to run the analysis. After the Rasch analysis to obtain total playfulness scores for each participant, a mean and standard deviation were calculated. Means and standard deviations of each of the ToP item scores were also calculated in order to observe how the sample performs on each item.

4.6.2 Second aim of study 1: to determine whether a range of demographic and developmental child and family characteristics are related to children's playfulness in metropolitan Adelaide.

Descriptive data, including frequencies, means and standard deviations for study 1 were gathered on the demographic characteristics of the sample. Pearson correlation coefficients were calculated to address hypotheses 1, 2, and 3. The Pearson product-moment correlation is used to determine the direction and strength of relationships between two variables that meet assumptions for normality of the data (Pallant, 2005). Pearson correlation coefficients were used to examine the following hypotheses:

Hypothesis 1: Decreasing parent age will be related to increasing playfulness in preschool children from metropolitan Adelaide (relationship between children's playfulness and both maternal age and paternal age examined).

Hypothesis 2: Increasing socioeconomic status will be related to increasing playfulness in preschool children from metropolitan Adelaide (relationship between children's playfulness and SEIFA scores, family income and maternal education examined).

Hypothesis 3: Children's age will be positively associated with playfulness in preschool children from metropolitan Adelaide (relationship between children's playfulness and children's age examined).

T-tests were then conducted to address hypotheses 4 and 5 due to the ordinal or categorical nature of the data. T-tests are used to compare the means of two groups (Pallant, 2005), for example the mean playfulness scores of children who scored competently on developmental variables compared with those who performed less competently on these variables. The t-tests were conducted for the following hypotheses:

Hypothesis 4: Children rated as having competent developmental skills by their preschool teachers (in their approach to learning, socioemotional development, gross and fine motor skills, and receptive and expressive language) will be more playful than children rated as less competent (t-tests conducted to determine differences in levels of playfulness for children rated on each of these variables as competent or less competent: note that ordinal variables were dichotomised).

Hypothesis 5: Preschool aged boys will have significantly higher playfulness scores than preschool aged girls from metropolitan Adelaide. .

4.6.3 Aim of study 2: to determine to what extent aspects of the family caregiving environment (the attachment relationship, mind mindedness, parenting practices and parent playfulness) are related to children's playfulness.

For study 2, descriptive data (means and standard deviations) were gathered for the outcome variable of children's playfulness, as well as the potential predictors of playfulness such as mind mindedness, parent playfulness, parenting practices, and

attachment behaviour. Assumptions of the data were checked in order to determine normality, and variable transformations were conducted as appropriate (refer to section 5.3.1). Pearson correlation coefficients were calculated to investigate the following hypotheses:

Hypothesis 6: Children identified as having lower levels of attachment behaviour problems will have greater levels of playfulness than those identified as having higher levels of attachment behaviour problems.

Hypothesis 7: Increasing levels of parent mind mindedness will be associated with greater playfulness in preschool children.

Hypothesis 9: Higher levels of parent hostility will be associated with lower levels of playfulness in preschool children.

Hypothesis 10: Higher levels of parental playfulness will be associated with higher levels of playfulness in preschool children.

Spearman's rank order correlation is a non-parametric test that is used to determine relationships between variables that do not meet the assumptions of parametric techniques, such as having a normal distribution (Pallant, 2005). Spearman's rank order correlations were performed on skewed variables that could not be reliably dichotomised (parenting warmth, reasoning and consistency), and this was used to investigate the following hypothesis:

Hypothesis 8: Higher levels of parenting practices such as warmth, reasoning, and consistency will be associated with greater playfulness in preschool children.

4.7 Summary

This chapter has provided an overview of the method used in study 1 and 2, and reiterated the hypotheses that were developed on the basis of the literature throughout Chapter 2 and Chapter 3. A description of recruitment and characteristics of the sample, and assessment procedures and instruments has been provided. Lastly, the statistical analysis was presented. The next chapter will present the results for studies 1 and 2.

CHAPTER 5 - STUDY ONE AND TWO: RESULTS

The results for studies 1 and 2 are presented in five sections. The first two sections address the characteristics of the sample for both studies and the descriptive statistics of the measures used in study 1. Section 5.3 presents the results for study 1, addressing the research question and then the five hypotheses. Section 5.4 describes the descriptive statistics of the measures used in study 2 as well as relevant preliminary analyses that were conducted. Section 5.5 tests the hypotheses (numbers 6 to 10) for study 2.

5.1 Characteristics of the sample

In this section, the frequencies and mean scores for demographic characteristics of the participants and their families, as well as the mean scores on the key variables of interest will be presented. It should also be noted that characteristics of the sample for this study have been compared with population statistics from the Australian Bureau of Statistics [ABS (where available)] and a nationally representative sample of the families of 4-year-old children in Australia where the relevant statistics are available (Zubrick et al., 2008).

The characteristics of the total sample for study 2 (n=122) are reported in this section, but note that, of this total sample, the sample size for study 1 is 118 (due to 4 participants' scores not fitting the Rasch model (as discussed in section 5.3). Where some demographic data is missing, the Test of Playfulness scores for these children were retained in the Rasch analysis to identify the level of playfulness in preschool-aged children in South Australia.

5.1.1 Child characteristics

Table 5.1 summarises the characteristics of children in the sample. The average age of children in the study was 55.12 months (range: 48-62 months), and as shown in Table 5.1, a little over half of the children were boys (53%). Of the children participating, 8.3 per cent were reported as having either health and/or developmental issues such as allergies, asthma, eczema, juvenile arthritis, and minor language delays. In relation to gender

balance, the current study had slightly more males than two nationally representative samples (with data gathered in 2011), in which approximately 51.1 to 51.33 per cent of children aged from 1 to 4 years of age were boys (ABS, 2013; Australian Institute of Health and Welfare, 2012).

Table 5.1 Child characteristics

n=122	Percentage*	Range	Mean ± SD
Gender			
Male n=66	54		
Female n=56	46		
Age in months		48-62	55.13 ± 3.54
Country of origin			
Australia (Caucasian)	92		
Aboriginal Australian	1		
Europe	3		
Asia	4		
Attends child care			
Yes	38		
Yes, in the past	26		
No	36		

*Percentages reported are valid percentages to account for missing data and are rounded to the nearest whole number

5.1.2 Caregiver characteristics

The characteristics of the caregivers of children in the study are included in Table 5.2. Of the caregivers involved as respondents in the study, 95.9 per cent were natural mothers. The remainder were natural fathers (n=3), a step-mother and a grandmother. The respondents provided details about partner and family characteristics, and these are included in Table 5.2. The mean age of mothers/mother figures in the study was 35.33 years, with approximately 69 per cent in the 30- to 40-year-old age group.

A large proportion of mothers/mother figures in this study were born in Australia (83%), with a little over one third of women having tertiary qualifications (35.6%), and about 20 per cent having completed year 11 and/or 12 as their highest level of education. Fifty-eight per cent of mothers in the current study were employed, with 7 per cent working

full-time. Of these women employed, approximately one third worked in jobs requiring a degree, and another one third worked in clerical jobs.

Table 5.2 Parent/carer characteristics

	Percentage Mother/ mother figure* N=121	Range	Mean ± SD	Percentage Father/ Father figure*† N=118	Range	Mean ± SD
Age		24-50	35.33 ±		25-55	38.03 ±
24-28	10.9		5.33	4.3		6.18
29-33	22.7			19.6		
34-38	39.5			35.9		
39-43	21.9			22.3		
44-48	4.2			10.2		
49-53	.8			6.8		
54-58				.9		
Education (highest level)						
Primary School	1			1		
Some years of High Sch	18			24		
Year 12 or equivalent	20			20		
Technical or trade qual	25			29		
Tertiary Qualifications	36			26		
Employment						
Not employed	38			4		
Part-time employment	51			4		
Fulltime employment	7			86		
Other (e.g. student)	4			6		
Employment type						
Jobs requiring degree	36			26		
Technical jobs	18			26		
Trades	6			23		
Clerical	31			8		
Transport/ Labourers	9			12		
Country of origin						
Australia (Caucasian)	82			83		
Aboriginal Australian	1			1		
Europe	11			10		
New Zealand	1			3		
Africa	1			1		
Asia	4			2		

*Percentages reported are valid percentages to account for missing data

†Figures relate to total percentages of fathers/ father figures in families in the study, as opposed to those who were respondents (n=3).

Characteristics of the caregivers in this study had some similarities to that of caregivers in nationally representative samples (Zubrick et al., 2008). The mothers in the current study were similar in age (69%) compared with approximately 65 per cent in a nationally representative sample (Zubrick et al., 2008), and slightly more (83% compared with approximately 75%) were born in Australia. The current study had a greater proportion of mothers/mother figures who had tertiary qualifications (35.6%) compared to the nationally representative sample (24.1%). Fifty-eight per cent of mothers were employed in both this study and a national study which examined mothers with children 4 years and under (Baxter, 2013), however, there was a large difference in the proportion of those who worked full-time (i.e. 7% in the current study compared with 20% in the study by Baxter). The age of fathers was similar in this study to a nationally representative sample, with 56% and approximately 58% respectively in the 29 to 38 year age group (Zubrick et al., 2008). Fathers in the current study were born mainly in Australia (84%), and 86 per cent were in full-time employment, which was comparable to secondary carers working full-time in Zubrich et al.'s national study (86%). Approximately 26 per cent of fathers in this study had a tertiary qualification compared with 27.3 per cent in a national study (Zubrich et al., 2008).

5.1.3 Family characteristics

As shown in Table 5.3, of the families in the study, 21.6 per cent had an annual income of less than $35,000. Intact families (in which the participant child lived with two natural parents) accounted for 83.3 per cent of the sample, and around 15 per cent were living in sole parent families. Less than 2 per cent of children in the study lived in step-parent families (i.e. where the child lived with one natural parent and a step-parent or de facto partner of the natural parent). Of these family characteristics, there was a higher proportion of children living with both natural parents and considerably fewer living in step-parent families than in a nationally representative sample. In a national sample, approximately 78 per cent of 4-year-olds and under were living with two natural parents, and 7 per cent in a step or blended family (ABS, 2013; Weston, Qu, & Baxter, 2013). A little more than half of the families in the study had two children, which was again a similar demographic to that of the larger Australian study (Zubrich et al., 2008).

Table 5.3 Family characteristics

n=122	Percentage*	Range	Mean ± SD
SEIFA Decile		1-10	5.53 ± 2.92
1	11.6		
2	8.3		
4	29.8		
6	13.2		
7	3.3		
8	14.9		
9	5.8		
10	13.2		
No. children in home		1-6	2.25 ± .93
1	16.7		
2	55.0		
3	17.5		
4	9.2		
5	.8		
6	.8		
Family Structure			
Two natural parents	83.3		
Mother only	14.2		
Father only	0.8		
Other	1.7		
Place of child in family			
First	35.8		
Second	28.3		
Third	10.8		
Fourth	7.5		
Only	15.8		
Family income**			
Less than $35,000	21.6		
$35,000 - $49,000	10.3		
$50,000 - $64,000	14.7		
$65,000 - $80, 000	21.6		
More than $80,000	31.9		

*Percentages reported are valid percentages to account for missing data

** 4 missing responses for income

5.2 Descriptive statistics of the measures used in study 1

The ToP, the Brief Developmental Checklist, and demographic data were collected for study 1. The range of scores for the ToP in study 1 was -3.45 to 3.00. The mean playfulness score for the study was -.604 (SD = 1.49).

The descriptive statistics for the Brief Developmental Checklist are presented in Table 5.4. As shown, most children were performing in the competent/more competent category, with a minimum of 71 per cent performing competently in socioemotional development.

Table 5.4 Descriptive statistics of the Brief Developmental Checklist

Aspect of child development	Percentage
Developmental screening	
– socioemotional	
Competent (score 1 or 2)	69.6
Less competent (score 3 or 4)	30.4
– approach to learning	
Competent (score 1 or 2)	82.6
Less competent (score 3 or 4)	17.4
– gross motor skills	
Competent (score 1 or 2)	91.3
Less competent (score 3 or 4)	8.7
– fine motor skills	
Competent (score 1 or 2)	78.8
Less competent (score 3 or 4)	21.2
– expressive language	
Competent (score 1 or 2)	81.7
Less competent (score 3 or 4)	18.3
– receptive language	
Competent (score 1 or 2)	87.7
Less competent (score 3 or 4)	12.3

5.3 Addressing the research question for study 1: Rasch analysis

This section addresses the first research question, *What is the level of playfulness in preschool children in metropolitan Adelaide?* Rasch analysis was conducted using

Winsteps (Linacre, 2012) to obtain interval level scores for the ToP (Bundy, 2004). Further analysis of the nature of playfulness in this sample involved examining the performance of participants on individual items of the ToP, as presented in section 5.3.3.

5.3.1 Checking assumptions of the data: Normality

Prior to further analyses, the variables were examined using SPSS to ensure that the assumptions of univariate and mulitvariate statistics were met as suggested by Tabachnick & Fidell (2013). Assumptions of normality were examined using visual inspection as this can often be more useful than formal inference tests for large samples, for example with 100 or more cases (Tabachnick & Fidell, 2013). Visual inspection was supported using commonly used guidelines which investigate data skewness by a calculation involving both the skewness statistic and the standard error of skewness (Čisar & Čisar, 2010). Several variables, including the ADC, and three of the parenting variables (warmth, consistency, and reasoning) were found to have significant skewness and kurtosis (refer to Table 5.5). A square root transformation was used for the ADC variable as recommended by Tabbachnick and Fidell (2001, p. 82). Transformations were not successful at reducing skewness or kurtosis for the parenting variables. It was not possible to dichotomise these variables into meaningful variables because the scores were tightly skewed to the positive end. Therefore, Spearman's rank order correlations were conducted.

Table 5.5 Skewness and kurtosis of ADC and parenting variables

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ADC Total*	115	16.46	4.64	.66	.23	.02	.45
Warmth	118	4.39	.36	.05	.22	-.71	.44
Reasoning	118	4.28	.55	-.42	.22	-.10	.44
Hostile	118	2.64	.52	-.08	.22	-.10	.44
Consistency	118	3.86	.58	-.19	.22	-.28	.44

*ADC - Attachment Disorder Checklist

5.3.2 Rasch analysis of playfulness scores

Rasch analysis uses a probability model to estimate person 'ability' and item 'difficulty' by "comparing the response patterns of individuals to the entire sample" (Duncan et al., 2003, p. 951). These equal-interval measures are called 'logits' (log-odds probability units); the units of measurement in Rasch which are derived from logarithmic conversion of ordinal data for both person ability and item difficulty (Duncan et al., 2003; Wallen et al., 2009). That is, a logit measures "the odds of a person being able to perform a particular task" (Duncan et al., 2003, p.952). Rasch analysis is conducted progressively, using both decision making and the statistical evidence to ensure the best fit of data to the Rasch model and is used frequently to develop a clinically useful tool (Wallen et al., 2009). However, the major purpose of using Rasch analysis in the current study is to obtain an appropriate measure of person ability for each participant which takes into account item difficulty.

Rasch analysis was conducted to examine goodness-of-fit: both outfit and infit statistics were considered. The outfit statistic is a chi-square statistic that is sensitive to outliers (Linacre, 2012) while the infit statistic examines strings of responses rather than individual items and helps to determine items that do not measure the same construct as other items in the instrument (Duncan et al., 2003; Linacre, 2012). The expected mean square values in Rasch analysis should be close to 1, with values between .5 and 1.5 being productive of measurement (Linacre, 2012), and these are the parameters that are usually used for test development (e.g. Lautamo et al., 2005; Wallen et al., 2009). Observations that are recorded on a rating scale are usually intended to measure the degrees of just one attribute (Linacre, 2002). Hence the value of Rasch analysis is that it determines the uni-dimensionality of the construct being measured. Mean-squares of greater than 1 indicate greater randomness or noise in the data than would be expected in the model (B. Wright & Linacre, 1994). Mean-square values greater than 2 in the model degrades measurement and detracts from the model, while mean square values from 1.5 through to 2 neither contribute to nor degrade measurement, but indicate variance in the data from another source or noise that is not consistent with the Rasch model (Linacre, 2012). As the aim of the Rasch analysis in this study was to calculate person scores rather than for test development, the less conservative value of 2 (rather than 1.5) was used as the upper mean-square cut off point.

Rasch modelling involves a process of eliminating misfitting items and/or people until an acceptable Rasch model is obtained (Linacre, 2012). Initial Rasch analysis was conducted on the ToP raw scores using Winsteps (Linacre, 2012), and included 127 person scores for studies 1 (n-122) and 3 (n=5). Table 5.6 shows the least fitting items, that is, those that fall outside of the parameters of 0.5 to 1.5 which is ideal for test development. Linacre (2012) recommends examining outfit statistics first, so the first decision was to delete the item *Extent of mischief or teasing* from the subsequent analysis because of the higher than desirable mean-square value in the outfit statistic.

Table 5.6 Item statistics for initial Rasch analysis including all items: Misfit order - Most misfitting items (Infit and Outfit)

Item Name	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
Extent of mischief or teasing	1.54	2.0	2.81	2.6
Extent of pretending	2.01	7.0	1.93	6.6
Extent of deciding what to do	1.03	.20	2.00	1.9
Skill of being engaged	1.89	5.6	1.97	5.9
Extent of social play	1.96	6.0	1.92	5.7
Extent of using clowning/joking	1.53	2.4	1.73	1.7
Skill of interacting with objects	.45	-5.6	.43	-5.8
Intensity of playing with others	.44	-6.2	.44	-6.1

Misfits of less than 1 indicate scores that are somewhat redundant because they are overly predictable (B. Wright & Linacre, 1994). The mean-square should generally be a minimum of 0.5, but these are only of concern when shortening an instrument (Linacre, 2012), and should be retained in analyses when using data from an existing test instrument (B. Wright & Linacre, 1994). Therefore, while the mean square values for *Skill of interacting with objects* and *Intensity of playing with others* were at the lower end of the continuum, they were retained in subsequent analyses.

The Rasch analysis was then re-run with 30 items. B. Wright and Linacre (1994) explain that persons and items are both parameters of the Rasch model and are, therefore, considered the same from a statistical viewpoint. However, in reality, items should be expected to behave better as person skills could be expected to change. Therefore, B. Wright and Linacre (1994, p. 370) recommend applying fit rules more strictly to items rather than persons, as "a few maverick persons" will have minimal impact, whereas misfitting items may indicate queries about test administration or the construct being measured. Linacre (2012) recommends that if a researcher's primary interest is in measuring person performance, then only extremely misfitting persons should be removed from the analysis. The misfitting persons were examined more closely in this analysis (see Table 5.7) because of noticeably high meansquare statistics. Of the 127 person scores in the initial Rasch analysis, persons 6, 48, 91 and 12 were deleted because they were extremely misfitting. This brought the total number for study 1 to 118, while number of participants for study 3 remained at 5.

Table 5.7 Person statistics: Misfit order according to Rasch analysis (127 persons, 30 items) - Persons with meansquare scores of 2 or greater (Infit and Outfit)

Person Number	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
006	1.51	1.80	5.30	3.00
048	.91	-.20	4.87	4.00
091	1.18	.70	3.25	4.10
012	2.10	3.10	3.05	2.80
002	2.23	3.40	1.93	1.20
119	1.92	2.70	2.15	2.10
087	1.43	1.50	2.59	2.70
033	.86	-.40	2.13	1.60
109	1.38	1.40	2.07	2.40
087	1.63	2.00	2.02	2.20
001	2.00	3.10	1.63	1.40

Rasch analysis was once again conducted with 123 persons and 30 items. While there were still person misfits, they were not as extreme as in the previous analysis, with a maximum mean-square outfit score of 2.52 for person number 33. Because the aim was to retain as many people as possible, the items were again examined. With mean-square statistics higher than 2.00 (see Table 5.8), *Extent of pretending* and *Extent of social play* were deleted from the analysis. When the analysis was re-run with 123 persons and 28 items, *Skill of being engaged* was also then deleted as its mean-square statistics were 2.26 (infit) and 2.41 (outfit).

Table 5.8 Item statistics for Rasch analysis of 123 persons and 30 items: Only items with meansquare scores of 2 or above are reported.

Item Name	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
Extent of pretending	2.10	7.40	2.03	7.00
Extent of social play	2.00	6.20	1.96	5.8

After the final Rasch analysis, while there were still 11 people who had outfit mean-square scores above 2, these were retained in keeping with Linacre's principle of removing only extremely misfitting people if primarily wanting to measure person performance. After the final analysis, no items had mean-square statistics of 2 or above, and all but one item *Skill of using mischief/teasing* fell under 1.7, which according to B. Wright and Linacre (1994) is acceptable for clinical observation data. The final analysis of items in misfit order is contained in appendix 16.

Person separation in Rasch shows the extent to which items can differentiate between different levels of functioning on a scale (Duncan et al., 2003). A person separation index of 2 represents a good level of separation, while an index of 3 denotes an excellent level of separation (Duncan et al., 2003). Further, person reliability needs to be above .8 to ensure that the instrument has sufficient sensitivity to distinguish between high and low performers (Linacre, 2012). Person separation was 2.91 and person reliability was .89 in the Rasch model, indicating that the ToP can, in fact, differentiate between levels of playfulness in preschool children.

The final mean playfulness score for the study was -.604 (SD=1.49). An online independent samples t-test (Graphpad Software, 2015) was conducted to determine whether there was a significant difference between the mean playfulness in this study, compared with other studies of playfulness with children of a similar age. Two studies that included typically developing preschool children were compared, one from Canada (Brentnall & Bundy, 2009) and one from the United States of America (Saunders et al., 1999). There was no significant difference in playfulness scores between the current study (M=-.604, SD=1.49) and the study from the United States of America (M=-.093, SD=.79; $t(141)=1.461$, p=0.146). There was, however, a significant difference in playfulness scores between the current study (M=-.604, SD=1.49) and the Canadian sample (M=.44, SD=.8; $t(142)=3.057$, p=.0027).

5.3.3 ToP item scores for study 1

In order to examine how playfulness was displayed by children in this sample, the means and standard deviations of the raw scores for each of the items are presented in Table 5.9. The mean item scores are also presented in appendix 17 along with the order of item difficulty in this study and the order of item difficulty presented in the ToP manual (Bundy, 2004), which is based on the performance of nearly 2000 children (Skard & Bundy, 2008).

Table 5.9 Mean and standard deviation for each if the ToP items presented under each element of playfulness

ToP items	Study 1 mean	Study 1 SD
Control of self		
1. Extent of deciding what to do	2.88	0.33
2. Extent of feeling safe	2.96	0.20
3. Intensity of interacting with objects	1.76	0.46
4. Skill of interacting with objects	1.96	0.30
5. Skill of modifying activity to maintain challenge or make it more fun	0.91	0.56
6. Skill of transitioning between activities	1.41	0.67
Control – shared		
7. Skill of entering the play of others	0.39	0.66
8. Skill of initiating play with others (new activities)	0.83	0.74
9. Skill of negotiating needs	0.89	0.80
10. Skill of sharing ideas or objects	1.02	0.71
11. Skill of supporting the play of others	0.54	0.63
12. Intensity of playing with others	1.19	0.52
13. Skill of playing with others	1.11	0.70
14. Extent of social play*	1.83	0.98
Freedom from constraints of reality		
15. Skill of pretending	0.75	0.76
16. Extent of using people or objects unconventionally	0.16	0.43
17. Skill of using people or objects unconventionally	0.24	0.55
18. Skill of using mischief/teasing	0.23	0.59
19. Extent of using clowning/joking	0.15	0.40
20. Skill of using clowning/joking	0.37	0.66
21. Extent of pretending*	0.97	0.99
22. Extent of mischief or teasing*	0.10	0.35
Source of motivation		
23. Extent of being engaged	2.7	0.46
24. Intensity of being engaged	1.84	0.55
25. Extent of being involved in the process	2.87	0.34
26. Intensity of persistence	1.44	0.77
27. Intensity of showing positive affect	1.22	0.44
Framing (play cues)		
28. Extent of giving cues	1.51	0.68
29. Skill of giving cues	1.68	0.56
30. Skill of responding to cues	1.04	0.66
31. Skill of being engaged*	1.77	0.81

*Note that these items were deleted from the Rasch analysis because they did not fit the Rasch model as described in section 5.3.2.

In the current study, items that seem to be easier (that is, are higher in the hierarchy of item difficulty) than items presented in the ToP manual (Bundy, 2004) include: *Intensity of persistence* (Item 26), *Intensity of showing positive affect* (Item 27), *Skill of using mischief/teasing* (Item 18), *Intensity of being engaged* (Item 24), *Intensity of playing with others* (Item 12), *Skill of using clowning/joking* (Item 19: it is of note that Bundy no longer includes this item in the Rasch analysis for the instrument because it did not fit the model). Items that seem more difficult for children in this study compared to the order presented in the manual include: *Skill of transitioning between activities* (Item 6), *Skill of responding to cues* (Item 30), *Skill of negotiating needs* (Item 9), *Skill of sharing ideas or objects* (Item 10).

5.3.4 Testing the hypotheses for study 1

This section relates to the second research aim for study 1 (hypotheses 1 to 5): to determine whether a range of child and family characteristics are related to children's playfulness in metropolitan Adelaide.

Children's playfulness was significantly and positively related to one measure of socioeconomic status, the SEIFA score (though only approaching a moderate correlation), but there was no relationship with family income or maternal education (see Table 5.10). There was also a significant, positive relationship between children's playfulness and maternal age, but again the size of the correlation was approaching a moderate correlation by Cohen's (1988) convention. No relationships were found between children's playfulness and the child's age or paternal age (see Table 5.10).

Table 5.10 Pearson correlations between playfulness and demographic variables

r	SEIFA score	Age of Child	Maternal age	Paternal age	Family Income	Maternal education
Child play	.25**	.17	.24**	.17	.14	.05

* p < .05
** p < .01

Hypothesis 1 was not supported, as the direction of the relationship was opposite to that expected: increasing parent age was associated with increasing playfulness in preschool children from metropolitan Adelaide, so, the older the parent, the more playful the child.

Hypothesis 2 was partially supported: Increasing socioeconomic status (as measured by the location in which the family lived) was related to increasing playfulness in preschool children from metropolitan Adelaide. There was, however, no relationship between children's age and family income or maternal level of education.

Hypothesis 3 was not supported, as there was no relationship found between children's age and their playfulness in the current study.

The relationship between playfulness and the remainder of the demographic and developmental variables that have been found to be correlates of playfulness in previous studies were examined using t-tests because they were categorical variables.

Independent samples t-tests were conducted to determine whether there were any differences in playfulness based on how children were rated by teachers on the Developmental Checklist items (see Table 5.11), including socioemotional development, approach to learning, gross motor skills, fine motor skills, expressive language skills and receptive language skills. The t-tests indicate that there was a significant difference in playfulness based on whether children were rated as competent or less competent in socioemotional development, approach to learning and fine motor skills. Consequently, children rated as more competent in socioemotional development, approach to learning and fine motor skills were more playful than children rated as less competent in these skills.

Table 5.11 T-tests of the developmental items and playfulness

	Competent		Less competent		T	df	Sig. (2-tailed)
	Mean Playfulness	SD	Mean Playfulness	SD			
Socioemotional	-0.29	1.48	-1.21	1.4	-3.03	109	.003**
Approach to Learning	-0.44	1.5	-1.18	1.45	-1.96	109	.05*
Gross motor	-0.49	1.49	-1.29	1.63	-1.61	109	.110
Fine motor	-0.44	1.59	-1.10	1.08	-2.3	107	.026*
Expressive lang.	-0.44	1.56	-1.15	1.10	-1.94	109	.055
Receptive lang.	-0.53	1.56	-0.79	1.15	-0.59	108	.556

* $p < .05$
** $p < .01$

Consequently, hypothesis 4 was partially supported: Children rated as having competent developmental skills by their preschool teachers (in their approach to learning, socioemotional development, and fine motor skills) were more playful than children rated as less competent. There was, however, no relationship between children's playfulness and how they were rated in gross motor skills and expressive and receptive language.

Hypothesis 5 was not supported. An independent samples t-test was conducted to determine whether boys were more playful than girls. There was no significant difference in playfulness scores between boys (M= -0.69, SD = 1.41) and girls (M= -0.48, SD= 1.58; t(114) = -0.75, p= 0.36), and there was a small effect size (eta squared = .01).

5.4 Preliminary analysis and descriptive statistics of the measures used in study 2

As previously discussed, study 1 and 2 were conducted concurrently. This section describes the descriptive statistics and preliminary analysis of the measures used to test relationships in the *Integrated model of playfulness*. The measures used in study 2 include the Mind Mindedness Measure, the Parenting Questionnaire, the Adult Playfulness Scale, the ADC and the ToP. Prior to testing the hypotheses for study 2, the

descriptive statistics and any relevant preliminary analyses will be described here or represented in the Table 5.12.

5.4.1 Preliminary analysis

This section relates only to the analysis conducted with the Mind Mindedness Measure in order to ensure inter-rater reliability. In order to ensure reliable coding of the mind mindedness interview question, an additional rater coded 20 of the transcribed interviews. Subsequently, an intra-class correlation (ICC) was conducted to determine inter-rater reliability. Hallgren (2012) suggests that ICCs be used in studies with two or more coders, and that a single measures ICC should be used in studies in which a subset of participants is scored by more than one coder, with the remainder rated by just one coder. ICCs provide a measure of inter-rater reliability estimates, as they "incorporate the magnitude of the disagreement" (Hallgren, 2012, p.9). A two-way model for the ICC was used because coders were not randomly selected for each participant from a larger population of coders (Hallgren, 2012). Further, an ICC for absolute agreement was used rather than consistency in ratings, as it was important for coders to be similar in absolute scores obtained. As shown in Table 5.12, the ICC between the two raters was .75, which represents an excellent level of agreement for qualitative ratings of agreement, as the excellent range is considered to be values between .75 and 1.0 (D. V. Cicchetti, 1994).

Table 5.12 ICCs for mind mindedness Scores: A two-way mixed effects model Intraclass Correlation Coefficient

	Intraclass Correlation	**95% Confidence Interval**		**F Test with True Value 0**			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.75[b]	.50	.89	6.81	23	23	<.001

5.4.2 Descriptive statistics of the measures used in study 2

As indicated in Table 5.13, high internal consistency was established for the Adult Playfulness Scale (Cronbach's alpha = .87), a similar finding to that of Schaefer and Greenberg (1997) who found Cronbach's alpha to be .90. The scores for parenting

practices were all similar to those found in the Longitudinal Study for Australian Children which was conducted with nearly 5000 families (Zubrick et al., 2008).

The mean mind mindedness scores for parents in this study was very similar to a sample of 89 preschool children (4-5 years of age) from metropolitan Sydney, although Lok and McMahon's (2006) sample had a slightly higher SD. The descriptive statistics for the ToP are reported in Table 5.13. A comparison of the mean playfulness score for this study compared with two international studies has been discussed earlier in this chapter. As shown in Table 5.13, the mean score for the ToP in this study appears to be similar to that of other studies conducted with preschoolers, and is not significantly different from the study by Saunders et al. (1999). Acceptable internal consistency was established for the ADC in the present study (Cronbach's alpha = .74). This is comparable with the internal consistency (Cronbach's alpha = .68) for the ADC found by Osborne and Delfabbro (2006).

Table 5.13 Descriptive statistics of the measurement variables

Constructs	**Range**	**Mean ± SD**	**Comparative data range**	**Comparative data mean**	**Crohnbach's alpha (current study)**
Adult Playfulness	93-175	136.6 ± 19.6	91-183	136 ± 20	.870
Parenting					
– warmth	3.5-5.0	4.39 ± .36	1.0-5.0	4.44	
– reasoning	2.5-5.0	4.28 ± .55	1.0-5.0	4.25	
– hostility	1.4-4.0	2.64 ± .52	1.0-5.0	2.19	
– consistency	2.2-5.0	3.86 ± .58	1.2-5.0	4.02	
Mind mindedness	0.0-.714	.334 ± .16		.36 ± .22*	
Test of Playfulness	-3.45-3.00	-.604 ± 1.49	-1.48-2.13*	.44 ± 0.80** -.093 ± .79***	
Attachment behaviour	10-30	16.46 ± 4.64			.743

* Lok & McMahon, 2006
** Brentnall et al., 2008
*** Saunders et al., 1999

5.5 Testing the hypotheses for study 2

The aim of study 2 is to determine to what extent aspects of the family caregiving environment are related to children's playfulness, and thus will test the model presented in Chapter 3. The hypotheses are largely investigated using Pearson correlation coefficients which are presented in Table 5.14.

Hypothesis 6: Children identified as having secure attachment behaviours will have greater levels of playfulness than those identified as having insecure attachment behaviours.

This hypothesis was supported. A small yet significant negative correlation (**r** =-.23, p= .05) was found between children's scores on the ToP and their scores on the ADC, that is, lower playfulness scores were associated were greater levels of dysfunctional attachment behaviours. To test this relationship further, the scores on the ADC were dichotomised (1= scores of 10-19; 2= scores of 20 and above). An independent samples t-test was then conducted to examine whether there was a significant difference in levels of playfulness for children with more disordered attachment behaviours compared to those without. There was no significant difference in playfulness scores between the low ADC (M= -0.46, SD = 1.54) and high ADC groups (M= -1.04, SD= 1.26; t(116) =1.84, p= .07), and there was a small effect size (eta squared = .03).

Hypothesis 7: Increasing levels of parent mind mindedness will be associated with greater playfulness in preschool children.

This hypothesis is supported. As shown in Table 5.14, there is a small positive relationship between parent mind mindedness and playfulness in preschool children (**r** = .19, p= .05).

Hypothesis 8: Higher levels of parenting practices such as warmth, reasoning, and consistency will be associated with greater playfulness in preschool children.

This hypothesis was not supported. As shown in Table 5.15, there were no significant correlations between children's playfulness and any of these parenting subscales (warmth, consistency and reasoning).

Table 5.14 Pearson correlations for outcome and potential predictor variables

r	Child play	Parent play	Mind minded	Attach Dis CL	Hostility
Child play	1.00	.09	.19*	-.22*†	-.09
Parent play		1.00	.01	.13	-.21*
Mind minded			1.00	-.19*	-.03
Attach Dis CL				1.00	.06
Hostility					1.00

* p < .05
** p < .01
† Transformed variable: ADC

Table 5.15 Spearman's rank order correlations: relationships between children's playfulness and parenting

Spearman's rho	Warmth	Reasoning	Consistency
Child play	-.033	-.090	.09

Hypothesis 9: Higher levels of parent hostility will be associated with lower levels of playfulness in preschool children.

This hypothesis was not supported. As shown in Table 5.14, there were no significant correlations between children's playfulness and parent hostility.

Hypothesis 10: Higher levels of parental playfulness will be associated with higher levels of playfulness in preschool children.

This hypothesis was not supported. No relationship was found between parent playfulness and playfulness in preschool children (**r** =.09).

5.6 Summary

This chapter has investigated each of the aims for study 1 and study 2. Study 1 aimed to both examine levels of playfulness in Australian preschool age children, and to determine whether a range of child and family characteristics are related to children's playfulness in

metropolitan Adelaide. The findings suggest that the level of playfulness in the preschoolers in this sample is similar to that found in another sample of preschool children (Saunders et al., 1999), but is significantly different to that found in another sample (Brentnall et al., 2008). Relationships were found between higher levels of children's playfulness and both higher maternal age and SEIFA score. Significant differences were found between children's playfulness and whether they were as competent/more competent or less competent than peers in socioemotional skills, fine motor skills and approach to learning.

The aim of study 2 was to determine to what extent aspects of the family caregiving environment are related to children's playfulness, and thus tested the model presented in Chapter 3. Small yet significant relationships were found between children's playfulness and both attachment behaviours and mind mindedness. No relationships were found between children's playfulness and variables such as parent playfulness, warmth, reasoning, consistency and hostility. The interpretation and implications of the results will be presented in the next chapter.

CHAPTER 6 - STUDY ONE AND TWO: DISCUSSION

The research findings for study 1 and 2 and the implications will be discussed in this chapter. The issues regarding measurement of children's playfulness, contextual issues, and the potential impact of the researcher's observations with regard to the differences between preschool settings/contexts will be explored. The research findings in relation to the aims of both studies will be discussed, with study 2 being explored in relation to the *Integrated model of playfulness*. Strengths and limitations of the studies are discussed. Finally, the implications for future research will be explored.

Study 1 is the first known study of playfulness in South Australian preschool children and examines children's playfulness in relation to their developmental status as well as other family demographics such as SES and parent age. Study 2 examines previously unexplored relationships between children's playfulness as measured by the ToP and their attachment behaviour along with a range of parent variables related to the family environment. The studies are multi-method, multi-informant studies, and this strengthens the findings.

6.1 Measurement of playfulness

The average playfulness level of preschool children in metropolitan Adelaide (mean = -.604; SD=1.49) was lower than in studies of typically developing children of similar ages in North America, including a study in Canada (Brentnall et al., 2008) (.44 ± 0.80) and one in the United States of America (Saunders et al., 1999) (-.093 ± .79). The average playfulness score in this study was statistically different from the Canadian study, but not from the sample in the Unites States of America. While the children in all three studies were of similar age, both of the North American studies had a broader age range which started from 32 months compared with 48 months in the current study. The study by Brentnall et al. (2008) also included children up to 72 months, while the upper age was 62 months and 63 months respectively for the current study and the study by Saunders et al. (1999). Therefore, potentially the difference in playfulness between studies may relate to age

rather than location. However, it should be noted that Saunders et al. (1999) did not find a significant difference (p=.59) between older and younger children in their study.

In considering the differences in levels of playfulness between children in the current study with the American and Canadian studies discussed above, the setting of the observation should also be considered. The current study observed playfulness in the outdoor setting, while Brentnall et al. (2008) observed playfulness inside, and Saunders et al. (1999) assessed playfulness in both the indoor and outdoor setting. It should be noted that the majority of studies using the ToP in the literature, generally use the indoor play setting (Cordier et al., 2010a), and this is a major difference between the current study and those in the literature. Playfulness is considered to be easier to demonstrate outdoors (Bundy, Waugh et al., 2009). Further, outdoor play spaces have also been found to foster more active engagement of young children in play (Blanchet-Cohen & Elliott, 2011; Tannock, 2008). Therefore, while it might be expected that playfulness levels might be higher in the current study because of the context of the outdoor session, this was not the case.

In relation to the Rasch analysis of the ToP, only approximately 87 per cent of items fit the Rasch model and approximately 88 per cent of people fit the model. These both fall below the desired 95 per cent fit which indicates that the instrument is adequately measuring the playfulness construct in this population (Bundy et al., 2001; Fischer & Molenaar, 1995). Items that do not fit the model tend to be either erratic (such as when a less playful child receives an unexpectedly high score for a difficult item), or too consistent, that is, not discriminating enough. The items deleted from the analysis included: *Extent of using mischief or teasing* (item 22)[3], *Extent of pretending* (item 21), *Extent of social play* (item 14), and the *Skill of being engaged* (item 31). One explanation regarding the lack of conformity to the Rasch model is that these items are not part of the construct of playfulness. However, this would appear to be unlikely, as these items have fit the Rasch model in numerous studies using the ToP (e.g. Skard & Bundy, 2008; Cordier et al., 2010b). Interestingly, the items *Extent of using playful mischief or teasing* (item 22) and *Extent of pretending* (item 21) were both items that did not fit the Rasch model in the

[3] The item numbers from the ToP referred to in this chapter are taken from Table 5.9 in the previous chapter.

study of validity and reliability by Bundy et al. (2001). Bundy et al. (2001) suggested that items may be influenced by differences in the setting, with children generally being more playful outside, indicating the need for further investigation of gender and environmental differences. They also proposed that the most likely explanation was that raters may not rate the items consistently. For example, for *Extent of pretending* (item 21), Bundy et al. (2001) considered that raters tended to be better able to recognise pretend play when the child assumed a role, such as pretending to be a dog or using a stick for a doll, rather than when the child pretended to do something such as fighting. In fact, each of the four items deleted from the Rasch analysis had between 11 and 13 unexpected responses for participants.

Sampling biases may have also impacted on children's playfulness scores in this study. While recruitment commenced in a manner to ensure random selection of participating preschools, there were differential response rates from preschools in different socioeconomic areas as indicated in Table 4.1. While extra recruitment of preschools with lower SEIFA scores was then implemented, the response rates in these preschools was still low. A further consideration relates to the decision to include children with health conditions and mild developmental delays in the sample, as this may have impacted on playfulness profiles, which in turn may have influenced how the data fit the Rasch model.

As presented in Chapter 5 and appendix 17, the hierarchy of item difficulty was different for the sample in this study compared with the ToP manual (Bundy, 2004). The differences in item hierarchy may be explained by the specific age of the sample in this study, compared with the range of ages used in gathering data on the instrument. For example, it may be that *Intensity of showing positive affect* (Item 27) is less difficult for preschool children than those within a broader age range, possibly because of Lieberman's (1977) suggestion that playfulness changes in the way it is manifest as people grow older. On the other hand, it is surprising that *Intensity of persistence* (Item 26) and *Intensity of being engaged* (Item 24), were less difficult items in this study, as level of persistence and engagement might be expected to increase as children grow older. It is expected that young preschool children found other items more difficult than some presented in previous studies including: *Skill of transitioning between activities* (Item 6), *Skill of responding to cues* (Item 30), *Skill of negotiating needs* (Item 9), and *Skill*

of sharing ideas or objects (Item 10). Consequently, it seems that certain aspects of playfulness may be either easier or more difficult for preschool children compared with a broader age-range. Alternatively, the difference of item hierarchy in this study may be due to the differing environmental conditions in which playfulness was assessed (e.g. a wide variety in the number of available playmates). Rigby and Gaik (2007) found that playfulness was different in three different settings for the children in their study, with children showing greater playfulness at home than at school. They recommended that if children's playfulness was more constrained in certain settings, then it was important to examine the differences in the child-environment fit.

6.1.1 Children's playfulness: Measurement considerations

When administering the ToP, it is generally recommended that players be observed playing in more than one environment and this is typically an indoor and an outdoor play session (Brentnall et al., 2008; Bundy, 2004). However, the majority of research studies viewed in the literature have conducted just one observation (e.g. Cordier et al., 2010b; Hamm, 2006; Okimoto et al., 2000). The ToP was administered in the current study by observing 15 minutes of outdoor play in a preschool setting because it is a little easier to demonstrate play outdoors than indoors (Bundy, Waugh et al., 2009; Bundy et al., 2001). When conducting observational assessments, Pellegrini, Symons, and Hoch (2014) discuss the value of conducting multiple and/or long observations in order to increase the reliability of scores obtained. However, Brentnall et al. (2008) found that scores based on 30 minute observations were actually lower than those based on 15 minute observations, did not yield any extra information (beyond a 15 minute observation), and did not improve test-retest reliability. Finally, there was also no significant difference in the scores based on scoring of the first 15 minutes versus the last 15 minutes of the recording. Further, some authors would argue that reliability is compromised by conducting lengthy observations because they might be more demanding for the participant (Cameron et al., 2001) and might also contribute to fatigue and boredom of the rater (Mudford, Beale, & Singh, 1990). Lengthy observations would be particularly difficult for the preschool age, whereby the child can maintain an engagement with an activity for approximately 15 minutes (Knox, 2008). Consequently, the length of

observation is also a pragmatic constraint, as lengthy observations would be disruptive to the preschool routine.

6.1.1.1 The context of administering the Test of Playfulness: Playmates

The ToP (Bundy, 2004) is administered in an environment that is conducive to play (Cordier et al., 2010c). Part of creating a supportive play environment is having familiar playmates for the child being observed. Creating a supportive context for play was the key reason that Cordier et al. (2010c) ensured that children with ADHD in their study were able to choose a playmate to bring to the videotaped play session. While children in the current study had some choice of playmates, this choice was restricted by the number of children for whom the researcher had permission to videotape as a playmate in the preschool setting. In many of the early studies which used the ToP in school or preschool settings (Saunders et al., 1999), there is little discussion about issues around videotaping and consent. For example, Brentnall et al. (2008) in the procedures for their study, documented that the observer follows and records the participating child with a video camera without directing the child's play. However, as ethical requirements continue to become more stringent and as national guidelines take on increasing importance (National Health and Medical Research Council, 2007), the current study required informed consent for all the children who were to be videotaped, whether they were participants in the study or approved as playmates to be videotaped. While children had choice of playmates within those who were approved for videotaping, the number of children for whom the researcher had permission to video was also very variable. Numbers of parents consenting to videotaping their child as a playmate was generally much higher in preschools with higher SEIFA scores, as was the case for recruitment rates for participant children. Consequently, children from lower SES backgrounds who potentially come from more impoverished backgrounds, were also then more limited in their choice of playmates for the ToP video. For example one child who attended a preschool in a suburb with a SEIFA decile of 1 played with only 1 playmate because only one other family consented to the videotaping.

Brentnall et al. (2008) found that an important factor that impacted on scoring was whether a child was playing alone or with others, even if the child had chosen to play alone in the presence of available playmates. Similarly then, perhaps the number of

playmates available and the child's closeness with those playmates would also impact on scoring. In fact, Brentnall et al. (2008) suggest that, while the ToP is robust to the influence of a specific playmate or activity, there are boundaries on this robustness, and that children might actually change the assessment conditions (and consequently the score) through their choice of playmates and activities. Therefore, the difficulties encountered in this study in terms of creating consistent conditions with regard to numbers of playmates would support Brentnall et al.'s (2008) suggestion that it would seem to be prudent to observe children playing with playmates of their choosing and with a similar number of playmates.

While observations made during free play in a naturalistic setting are less reliable than in a standardised experimental setting, reliability can be increased by having a homogeneous sample (Pellegrini et al., 2014). The sample in the current study, being predominantly 4-year-olds, was relatively homogeneous. However, the preschools which they attended were from a range of different socioeconomic areas throughout metropolitan Adelaide, providing some diversity, as discussed in the next section. Brentnall et al. (2008) maintained that the homogeneity of the sample, and hence the reliability of observational assessment, could be improved by standardising either the setting and/or activity. However, standardising the activity is impossible in the ToP, as it is designed to measure aspects such as a child's intrinsic motivation or sense of control. Therefore, providing choice for the child is imperative so that behaviours such as taking initiative, deciding what to do and transitioning between activities can be effectively assessed. One option though is to standardise the setting just as Cordier et al. (2010b) did in their study in order to increase the consistency of the results. However, there are disadvantages associated with this approach, including losing the benefit of observing the child in a familiar setting which in turn encourages playfulness according to Rigby and Huggins (2003). The other disadvantage of observing in the laboratory setting is that the scores cannot necessarily be generalised to the performance context or real world context of interest (Pellegrini et al., 2014). It would seem then that either approach, that is, observing in the naturalistic setting or in the experimental setting has obstacles that need to be overcome.

6.1.1.2 Variability in preschool environments

As described previously, Cordier et al. (2010c) discussed the importance of administering the ToP in a setting that is supportive of play. Rigby and Gaik (2007), when comparing the playfulness of children with cerebral palsy across different settings, found that children tended to be more playful in their home environment (compared to playtime at school or in a community setting). The increased playfulness at home was presumably because it was an environment with which children were most familiar and therefore more comfortable. In the current study, because it was expected that there would be wide variability in the level of support in the play environments at home (and some potentially unsupportive home environments), a decision was made to videotape the child at preschool, with the aim of providing a setting that was both familiar and comfortable for the child, as well as consistency across preschool settings (i.e. all preschools have a similar purpose and function with staff trained in preschool education). In reality, the play environments varied greatly in the preschools in the following ways:

- Some staff engaged in much more facilitation of children's play, despite the same instructions being given to all preschools (i.e. that the videotaping needed to be conducted during freeplay for the child, and for staff to allow freeplay to occur, but that they should only intervene if a child was unsafe or behaving unsafely towards others).

- Preschools differed in terms of outside environments – some had large open spaces which tended to facilitate lots of running, some had traditional home corner type props outside (e.g. a play oven, fridge and sink beside the sandpit), and there was variability in the larger outdoor equipment provided, such as slides, swings and cubbies.

- Preschools differed significantly in routines – while all preschools had a set routine, some kept structured group time to a minimum (e.g. snack time and then reading time on the mat at the end) which allowed for greater periods of freeplay, while others had structured group mat time, as well as structured play times for example for 'fine motor play'. This variability in the amount of structure also created logistical difficulties for videotaping the play observations. For example, if a preschool routine contained a lot of structured activities, sometimes the

researcher would only be able to videotape one participant in one preschool half day session. Those preschools which had longer freeplay sessions enabled the researcher to sometimes videotape 2 to 3 participants per session.

- The timing of the outdoor free play session and the size of the space sometimes seemed to influence play. For example, if children had been in structured activities for a lengthy time, then they would appear to enjoy 'running free', often making videotaping a difficult task. Further, extensive clinical experience of the researcher indicates that sometimes children with behavioural difficulties seem to feel less contained in a large outdoor environment, and therefore find it difficult to engage in true play. As discussed in section 6.1, the decision to observe playfulness in the outdoor setting may well have impacted on the results.

- Despite clarifying the preschool routine before starting the videotaping, sometimes the child's play was disrupted by pack-up time or fruit time.

- Given the constraints around the variable amount of unstructured play time available in each preschool, the time spent following a child's play with the video camera was restricted to the 15 minute taped observation. In order to assist children to feel comfortable in front of the video camera, researchers have spent 10 to 15 minutes following a child around with the camera before actually starting to record (Rigby & Gaik, 2007). While this would have been ideal in the current study, the time spent and distances travelled to some preschools made this extra 10-15 minutes prohibitive (e.g. at some preschools, the freeplay session only went for 20-25 minutes, so a 30 minute play session was not possible). Further, Brentnall et al. (2008) found that a longer 30 minute observation of a child's play did not yield any extra information (beyond a 15 minute observation) or improve test-retest reliability, and suggested that typically developing children do not appear to need extra time in order to become accustomed to being recorded by an observer. This seems to confirm previous opinion that the reactivity effect from the presence of an observer was not significant (Jacob, Tennenbaum, Seilhamer, Bargiel, & Sharon, 1994). While many children in the current study seemed unperturbed by the presence of an observer, at times the extent to which the observer was incorporated at the preschool (e.g. a regular visitor versus a one-

off visit) seemed to affect the play behaviours observed. Brentnall et al. (2008) pointed out the dilemma in the literature regarding whether participants required time to adjust to the presence of either a video camera and/or an observer. In order to help children to feel comfortable with having the researcher in the preschool in the current study, the researcher came at the beginning of the session, was introduced to the children during structured group time, and ensured that the camera was visible. Often during inside play children would ask questions about the camera. Therefore, children would usually feel comfortable with the observer and the camera by the commencement of outside free-play time. There were, however, differences between the amount of preparation and exposure which children had received to the camera. For example, at preschools where 10 to 15 participants were recruited, the children who were videotaped at the end of several days of the observer visits at the preschool had obviously had greater exposure to the researcher and the camera. At preschools where there were only 1 or 2 participants, generally the researcher visited once or twice, so those children had much less exposure to the observer. This was, however, unavoidable because of the different response rates and because of the desire to videotape children in a relatively naturalistic setting.

To account for these differences in settings, it may have been useful to include the Test of Environmental Supportiveness (TOES) (Skard & Bundy, 2008) in the study. The TOES was developed to be used in combination with the ToP, and to measure aspects of the environment to determine how supportive it is of a child's motivation for play (Bronson & Bundy, 2001; Skard & Bundy, 2008). That is, the TOES helps to determine environmental aspects that might be facilitating or hindering play, such as the play space and objects, and the impact of playmates or caregivers (Bundy, 1997; Skard & Bundy, 2008). As suggested by Bundy, Waugh et al. (2009), the TOES is useful specifically for considering the relative impact of the social environment on children's play. The TOES was not used in the current study because of both the extensive data collection and scoring required already, and it was considered that the children's preschool environments would be comparable and provide a setting in which each child felt comfortable. It is recommended that individuals be assessed in naturalistic contexts, as it facilitates a positive transaction between an individual and a facilitative environment (Letts et al.,

1994; Rigby & Huggins, 2003; Skard & Bundy, 2008). While children in the current study clearly felt safe in their preschool environment (as shown by the majority of children scoring a maximum score of 3 for *extent of feeling safe* (item 2), the number of available playmates and structure of the preschool setting clearly did influence the social environment. As such, use of the TOES may have been helpful in being able to control for the differences in the environment which may have impacted on ToP scores.

6.1.1.3 Children's responses to being observed

Careful examination of videos of children with high infit or outfit meansquare scores revealed that some of these children had difficulty engaging in play because they were too focused on the observer and the video camera. Children generally did not seem distressed by the camera, but rather, often seemed to 'perform' for it or over-exaggerate their play behaviour. While this seems counter to Brentnall et al.'s (2008) view that typically developing children do not need time to become accustomed to an observer, it is of note many of these children were either verbally described as having challenging behaviours by the preschool teacher and/or parent, or were rated as a lower score by the teacher on either *socioemotional development* or *approach to learning*. Therefore, children with social and emotional delays might not fit the category of 'typically developing children' who need little time to adjust to the camera. Many of these children tended to do lots of running away from and/or hiding from the observer in a teasing manner, engaging in provocative behaviours to other children to such an extent that it forced the observer to engage in limit setting (rather than being a neutral observer).

The ToP has been conducted in a number of settings. Most studies using the ToP (Skard & Bundy, 2008) have conducted observations of children in their natural environments such as kindergarten or school (Brentnall et al., 2008; Bundy et al., 2008). However, in a study by Cordier et al. (2010a), observations of a child's play were conducted and videotaped in a playroom in a clinic based setting or in a contained room at the child's school, with the same toys present for each play session to ensure consistency. While observational assessments conducted in context tend to be more valid, they are also "potentially less controlled" (Brentnall & Bundy, 2009, p.63). Merrell (2001), however, supported the use of the school playground for observations, particularly for those involving children's social behaviour, because the playground is where children commonly

interact with peers and is ecologically valid. He did, however, advocate for the discreteness and unobtrusiveness of the observer to minimise the likelihood of children's behaviour changing in response to an observer.

6.2 Playfulness and family characteristics

Various potential precursors or correlates of playfulness were discussed in Chapter 2, and it is of note that very few of these relationships between playfulness and various demographic variables were replicated here. There were significant relationships between children's playfulness and both SEIFA score (a measure of socioeconomic status) and maternal age. This would tend to support Barnett and Kleiber's (1984) finding of a correlation between child playfulness and higher socioeconomic status, although they found this relationship only in relation to girls which was in contrast to the current study. It is of note that the current study found no relationship between child playfulness and maternal level of education which may often be considered to be a reliable indicator of socioeconomic status (Winkleby, Jatulis, Frank, & Fortmann, 1992).

The positive relationship between child playfulness and increasing maternal age was in direct contrast to Barnett and Kleiber's (1984) study in which they found an inverse relationship between playfulness and maternal age, that is, girls with high levels of playfulness tended to have younger mothers. However, it should be noted that the relationship found in the current study was relatively small (r=.24). Nevertheless, this is an interesting finding and may relate to increasing maternal age in Australian society over the past 40 years; the median age of mothers for all registered births in 1971 was 25.4 years, in 1987 was 27.7 years and in 2009 was 30.6 years (ABS, 2011b; Carolan & Frankowska, 2010). The median age for all births of mothers in the United States of America, the location of the study by Barnett and Kleiber (1984) was 25.7 years in 1980 and 27.2 years in 2005 (Carolan & Frankowska, 2010; Martin et al., 2007; National Center For Health Statistics, 1985). While Barnett and Kleiber (1984) did not report the average age of the mothers in their research study, these statistics suggest that the mean age of mothers in this study (38.02 ± 6.16, i.e. approximate mean age at birth of child was 34) was much higher than the mean age of mothers in the Barnett and Kleiber (1984) study. Carolan and Frankowska (2010) discussed some of the potential reasons for increasing

maternal age, including higher levels of education and increasing levels of socioeconomic status amongst older mothers.

Consequently, discrepancies in maternal age, level of education and socioeconomic status may explain some of this difference in relationship between playfulness and maternal age. However, Carolan and Frankowska (2010) pointed out the increasing levels of maternal education, so it is interesting that there was no relationship between maternal level of education and playfulness scores in this study. In addition, some of the difference in relationship between playfulness and maternal age may be accounted for by the differences in instruments used to measure playfulness in both studies and the different methods of administration. Barnett and Kleiber's (1984) study used Lieberman's Playfulness Scale (Lieberman, 1977) which is an 18 item instrument which uses teacher report of their observations of children's playful behaviour. Barnett (1990), while agreeing with Lieberman's five traits of playfulness, critiqued her playfulness instrument for having too few items. Consequently, lack of reliability may well have contributed to the different results of each study. Part of this difference in result may be that the conceptualisation of playfulness in Barnett and Kleiber's study includes motor spontaneity. As such, potentially younger mothers are better at promoting more physically playful responses in their children. In contrast, the ToP which is used in the current study does not include motor spontaneity in its construct of playfulness.

It is also of interest that there was a lack of relationship between playfulness and both the place of the child in the family or the age of the child. This is in direct contrast to studies that have found an association between children's playfulness and birth order (Barnett & Kleiber, 1984) as well as chronological age of child (Lieberman, 1965). However, both of these studies used Lieberman's playfulness scale (Lieberman, 1977) which, as discussed, has been considered to have an insufficient number of items. Further, it should also be noted that the lack of association between playfulness and age of the child in this study may well have been because all of the children were of similar age. Zachopoulou et al. (2004) found that boys were more playful than girls using the Children's Playfulness Scale (Barnett, 1990). In contrast, the current study found no difference in playfulness between boys and girls. This difference in finding with regard to gender may reflect the different assessment instruments used or the different cultural settings (Greece versus Australia), and as such, warrants further investigation.

The relationships found in the current study between playfulness and both SEIFA score and maternal age potentially provide support for studies which have previously found a relationship between playfulness and the environment, particularly the child's familial environment (Bundy et al., 2008; Bundy, Waugh et al., 2009; Rigby & Gaik, 2007). However, it is interesting that there was no relationship between playfulness and other measures of SES such as family income and maternal level of education. The SEIFA score is based on the postcode where the family resides. Therefore, in addition to some family factors, perhaps playfulness is also influenced by the broader natural and built environment of children.

6.2.1 Playfulness and developmental variables

When examining developmental correlates of playfulness, it is of note that Barnett and Kleiber (1982) and Lieberman (1965) found relationships between playfulness and various cognitive skills such as divergent thinking. While the current study did not assess cognition or divergent thinking per se, it did gather developmental screening information from preschool teachers. It is particularly interesting that children rated by preschool teachers as competent or more competent than their peers in their social and emotional development or approach to learning had higher levels of playfulness than those rated as less competent than peers. Further weight can be placed on this finding when considering that the developmental information was gathered from teachers while playfulness was scored through independent observation and coding of play sequences outdoors, and as such, the result is not an artefact of common method variance. When rating children on social and emotional development, teachers were asked to consider aspects such as adaptability, cooperation, responsibility and self-control. Given these aspects, the link with playfulness is not surprising, especially considering that many of the items included in internal control involve the ability to co-operate with others and maintain appropriate control over self.

Approach to learning included the following prompts for teachers: attention, observation, organisation and problem solving. The element of intrinsic motivation on the ToP would particularly relate to these areas of approach to learning, especially aspects such as engagement in play, with problem solving being essential for control items such as *Skill of modifying activity to maintain challenge or make it more fun* (item 5), the *Intensity of*

interacting with objects (item 3) and *Skill of interacting with objects* (item 4). Problem solving would also be essential for many other aspects of the ToP, including items relating to *Skill of pretending* (item 15), *extent of using people or objects unconventionally* (item16), *and Skill of using people or objects unconventionally* (item 17). *Social Emotional Development* and *Approach to Learning* are very simple items rated by teachers and this provides a potentially efficient way of screening in preschools for those children with lower levels of playfulness, which in turn may be indicative of difficulties with adaptability and coping.

6.3 Playfulness and relationship with attachment behaviours

When examining potential relationships in the model presented in Chapter 3, a small correlation ($r= -.22$, $p<.05$) was found between a higher performance on the ToP and less dysfunctional attachment behaviours. Further, while the t-test to compare playfulness in children with high scores in attachment dysfunction and those with low scores was not significant ($p=.069$), it was approaching a significant relationship. It should be noted that the cut point of 20 which was used to divide the sample into 2 groups was lower than the score of 26 which, according to Osborne and Delfabbro (2006), indicates children in the clinical range for attachment behaviour. However, 26 was not a feasible cut point in this study because of the small numbers of children with scores of 26 or above. This may suggest that the ADC is not sensitive enough to detect attachment difficulties in a normative population. It also suggests that further research examining the relationship between children's playfulness and attachment behaviours is warranted, particularly if the sample included a greater proportion of children in the clinical range for attachment behaviour disorder.

The significant correlation found between playfulness and attachment behaviour, though small, would seem to be consistent with Seifer and Schiller's (1995) view that the exploration that arises out of a secure attachment relationship assists in the development of greater autonomy and appropriate play. These aspects seem congruent with control items (both control of self and shared control) on the ToP such *as Extent of deciding what to do* (item 1) *and Skill of initiating play with others* (item 8). Further, a parent's consistent responsiveness to an infant assists in the development of a sense of agency

(Carton & Nowicki Jr., 1994) and promotes self-reliance (Bowlby, 1973). Autonomy, a sense of agency and self-reliance would all seem to align with items on the ToP relating to C*ontrol of Self*, such as *Extent of deciding what to do* (item 1), *Skill of modifying activity to maintain challenge or make it more fun* (item 5), *Intensity and skill of interacting with objects* (items 3 and 4), and *Skill of transitioning between activities* (item 6).

In further considering the small relationship between the ToP and attachment behaviour, it is of note that Seifer and Schiller (1995) also highlighted the importance of the secure attachment relationship for facilitating mutual emotion regulation. The 'secure base behaviour' that begins in infancy (that is, seeking proximity to a caregiver for protection) is important for emotional development. When presented with a threatening or stressful situation, the secure base behaviour ensures that the child has the support of family as a coping resource, which in turn helps to facilitate management of emotions (Thompson, 1994). The ability to self-soothe that emerges from the anticipation of being comforted in the secure relationship (D. Barnett & Vondra, 1999; Cassidy, 1994) results in more regulated control of emotions by the time a child is preschool age. This development of emotion regulation is particularly important in the preschool years when children are learning to control their emotions whilst also developing mentalising abilities, that is, the ability to take on the perspectives of others.

Emotion regulation consists of "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 1994, p. 27-28). Emotion regulation involves dampening, intensifying or maintaining either positive or negative emotions, and may be conscious and effortful or unconscious and effortless (Gross & Thompson, 2007). Key skills involved in emotion regulation involve the ability to focus and/or shift attention, and the ability to inhibit or activate behaviour that produces adaptive, socially acceptable responses (Eisenberg, Hofer, & Vaughan, 2007). In young children, effective emotion regulation skills predict social competence and problematic behaviours such as lack of compliance, and have also been linked with demonstration of empathy and prosocial behaviour (Eisenberg et al., 2007). Appropriate skills in *Extent of giving cues* (item 28) and *Skill of responding to cues* (item 30), key aspects of framing the play (Skard & Bundy, 2008) would seem to be essential aspects of social competence and prosocial behaviours.

Further, emotion regulation would also seem to be important for many of the items relating to *Shared Control*, such as *Skill of sharing ideas or objects* (item 10), *Negotiating* to have needs met (item 9), *Skill of supporting the play of others* (item 11), *Skill of entering the play of others* (item 7) and *Skill of initiating play with others* (item 8). In addition to inhibiting emotional arousal, emotion regulation can also involve enhancing emotional arousal, for example, the child who increases their positive arousal in order to manage negative affect (Thompson, 1994). Consequently, this points to a potential relationship between attachment, emotion regulation and playfulness, particularly when considering *Intrinsic Motivation* items on the ToP as outlined by Skard and Bundy (2008). Items that relate to emotion regulation include: the *Extent and Intensity of being engaged* (items 23 and 24), the *Intensity of showing positive affect* (item 27) during the task, the *Extent of being involved in the process* (item 25) of an activity, and *Intensity of persistence* (item 26) with an activity. Bowlby (1973) also considered that security of attachment and consistent responses from parents assist with motivation. Therefore, the link between attachment behaviour and playfulness in this study, while not strong, is not surprising because of alignment with many elements of the ToP.

Given the small relationship found in this study between attachment behaviour and child playfulness, it would be interesting to further investigate this relationship using a tool to measure the security of attachment relationship rather than just the child's attachment behaviour. The use of a specific measure such as the Attachment Q-Sort by Waters and Dean (cited in Van IJzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven, 2004) to assess attachment security in the preschool years would have been too time intensive and intrusive to use in this study where there was already sufficient burden placed on families and preschools.

In relation to assessment of attachment behaviour, the Attachment Disorder Checklist (ADC) does have advantages because it is both brief and reliable. However, as it has previously only been used with children in out of home care (Osborne & Delfabbro, 2006), it may lack sensitivity in detecting differences in a homogeneous population. The use of a more detailed attachment measure would ensure that it is more specific to the type of insecure attachment, as the ADC does not differentiate between different types of attachment behaviours, for example, those children who might be less discriminating in their attachment behaviours compared to those who are more withdrawn and fearful.

Further, as attachment security is clearly so complex (as shown in Chapter 3), such a brief measure may over-simplify the construct. Teachers may also not have the sufficient depth of knowledge in the area to be able to accurately make judgements of children's performances on the items.

6.4 Parental mind mindedness and playfulness in preschool children

The presence of a relationship between parental mind mindedness and playfulness in preschool children, albeit small ($r = .192$, $p < .05$), highlights potentially important aspects of the environment in fostering playfulness in young children. The presence of this relationship points to the potential role that parents have in creating an environment which fosters playfulness in young children, particularly a parent who is able to value the child as an individual with his or her unique mental state. This would seem to be supported by the view of a number of authors who argue the important role of a supportive environment in the development of play and playfulness (Bundy, Waugh et al., 2009; Rigby & Huggins, 2003; Skard & Bundy, 2008; Sturgess, 2003; Sutton-Smith, 1980).

The small relationship between children's playfulness and parental mind mindedness may also relate to the complexity of factors involved in theory of mind and play. Dore, Smith and Lillard (2015) highlight the uncertainty about the nature of the relationship between pretend play and theory of mind. While many authors suggest that pretend play facilitates theory of mind development, Dore et al. maintain that the reverse in fact may be true: that theory of mind might actually foster pretend play, and in particular social pretend play. When engaging in social pretend play, children pretend to be someone different, with individual thoughts and emotions; this is why some authors (Harris, 1992) suggest that pretend play provides practice opportunities to help foster theory of mind. However, Dore et al. suggest that the inconsistent research results and the lack of support for a causal link between pretend play and theory of mind may be because theory of mind is necessary for engaging in social pretend play.

Given the links found in the literature between parent mind mindedness, mentalising abilities, symbolic play and theory of mind (Meins et al., 1998), further exploration of the relationship between mind mindedness and children's playfulness is important. It would

also be interesting to see whether this relationship between children's playfulness and parental mind mindedness was stronger if measuring playfulness indoors, as there may be greater opportunity to display aspects of playfulness related to mentalising abilities and symbolic play, especially with settings such as 'home corner'.

As discussed in Chapter 3, the ability to understand the perspective of others is fundamental to mind mindedness. One specific aspect of playfulness, that of pretend play, has important implications for understanding the perspectives of others. Two key aspects of pretend play to consider when thinking about understanding others' viewpoints are: decontextualisation (that is, referring to or engaging in actions, objects or events out of context, such as sitting in a box when pretending to drive a car) and decentration (that is, decentering from the self and focusing play actions onto something else, such as feeding a doll) (Casby, 1992; Stagnitti, 2009). Baron-Cohen (1996) emphasised the importance of the ability to decenter for the development of skills in understanding the perspective of others. This ability to decenter, that is to be able to take on the viewpoints of others, has also been considered to be integral to empathetic thinking and responding (Cordier et al., 2010b; Frith & De Vigemon, 2005). Cordier et al. (2010b) noted that children with ADHD had lower levels of empathy, as shown by their difficulty in decentering, seeming to be self-absorbed and intent on having their own play needs met.

Given that a key attribute of pretend play is considered to be the ability to decenter from the self and that this in turn seems linked to the capacity to understand the perspectives of others (Baron-Cohen, 1996; Casby, 1992; Stagnitti, 2009), it would be interesting to further investigate the links between mind mindedness and pretend play. In fact, research further investigating the relationship between mind mindedness and both social pretend play and theory of mind would be valuable, especially considering Dore et al.'s (2015) view that theory of mind may precede social pretend play.

Bernier and Dozier (2003) point out that it is unclear whether the method used to measure mind mindedness in parents of preschool children (i.e. the single question method) in fact is measuring the same concept as the infant measure in which parental language is analysed. They also query whether parental mind mindedness is in fact a stable concept throughout the child's infancy to preschool years, and that mind

mindedness may therefore not be a precursor to a secure attachment. Therefore, perhaps the single question measure is assessing a concept other than mind mindedness. Studies have shown that mothers of children in their second and third years of life are better able to refer to their children's mental states compared with mothers of younger children, and this may in fact reflect the fact that, as a child's level of functioning increases with age, they actually show signs of more observable mental activity (Bernier & Dozier, 2003; Dunn, Bretherton, & Munn, 1987). Therefore, Bernier and Dozier (2003) argue that the previous positive relationship found between attachment security and maternal mind mindedness in 3-year-old children (Meins et al., 1998) should be interpreted cautiously because, as the child grows, maternal descriptions should, in fact, become more mind-oriented.

Meins et al. (2001) further elaborated that it is not just the presence of mind-related comments that is important, but rather the appropriateness or accuracy of a mother's descriptions of their child's mental states that actually predicts attachment security. It is also interesting that since data collection for this study, Meins and Fernyhough (2010) have developed an assessment protocol which differentiates between the quality of the mind related comments rather than just identifying the presence of them (e.g. appropriate or nonattuned comments). Bernier and Dozier (2003) also speculate that describing an infant of less than 30 months in terms of their mental state might be indicative of a lack of maternal attunement, especially given developmental gains in the child's language and symbolic play by the age of three. They therefore stress the importance of maternal age-appropriate mind related comments. In the new scoring method of the mind mindedness measure, it may be easier to determine if the mother's comments are an accurate reflection of the child's mental state in the observational assessment of the maternal-infant interaction (rather than in the single-question measure).

The new method of calculation of the mind mindedness score involves further rating the mind-related comments as either appropriate or non-attuned (Meins, 2012; Meins et al., 2012; Meins & Fernyhough, 2010). The new method of scoring does not just classify statements as relating to the child's mental state versus other aspects such as behavioural or other characteristics, but also takes into account whether the statements are positive or negative mental descriptors. While this more specific method of scoring would seem

to assist in measuring a clearer construct, this scoring method was unavailable when coding of the mind mindedness transcripts commenced. Further research into the relationship between parental mind mindedness and children's playfulness using this new scoring format is recommended.

Establishing a clearer link between parental mind mindedness and child playfulness may have important implications for parent-child interventions as well as for allied health professionals and educators in creating an environment which fosters a child's individuality and values the child's personality. However, it is unclear whether it is possible for a professional to be mind minded about an unrelated child because Arnott and Meins (2007) maintain that mind mindedness is likely to be relationship specific, that is, it only seems to be evident in parents with their own children rather than in relation to unknown infants. However, it may be that the specificity is not necessarily related to the child being a biological child, but rather, mothers may well provide mind minded descriptions in relation to infants with whom they have a relationship (Arnott & Meins, 2007). Arnott and Meins (2007) pointed out the implications this might have for fostering, as the lack of opportunity to establish a relationship from birth may have an impact on the development of mind mindedness. Hence, if mind mindedness is specific to the mother-child relationship, it is unknown whether teachers and professionals who work with children can be mind minded in relation to specific children with whom they have an established relationship. However, because of the strong links discussed between the environment and playfulness, it would seem to be worth pursuing interventions that foster playfulness by focusing on creating environments which value a child for their specific mental state as they are consequently more likely to nurture a child's individuality. This in turn may well be nurturing playfulness.

6.5 The relationship between parent playfulness and playfulness of preschool children

The lack of association between adult playfulness and child playfulness in this study is initially surprising. There may be three possibilities that might explain the lack of relationship between parent playfulness and child playfulness in this study. Firstly, the Playfulness Scale for Adults (Schaefer & Greenberg, 1997) which was one of very few

potential instruments available at the commencement of this study, may in fact measure a narrower or outdated concept than adult playfulness as is discussed in the current literature. Secondly, issues around the measurement of child playfulness (either difficulties with the ToP or with the method of administration) as discussed earlier in this chapter may have also contributed to the lack of result. Finally, it may also be that there is no relationship between adult playfulness and child playfulness, and that adult playfulness is not an essential ingredient to creating child-centred environments which facilitate child directedness, exploration, spontaneity and joy.

Of the other measures of adult playfulness that were available at the commencement of the study, many were considered much less appropriate. For example, the Adult Playfulness Scale (Glynn & Webster, 1992) was designed for playfulness at work and was also considered to be biased towards positive responses. Schaefer and Greenberg (1997) also considered that the Adult Playfulness Scale measured correlates of playfulness rather than the construct itself. From a review of the literature, there were no other measures of adult playfulness, as other measures tended to include only specific parts of the playfulness construct such as spontaneity in the Personal Attitude Scale-II (Kellar, Treadwell, Kumar, & Leach, 2002), and therefore did not measure the necessary construct. Given that consistency and validity of the Playfulness Scale for Adults (Schaefer & Greenberg, 1997) was tested on American college students with a median age of 24 years, it was not the ideal measurement tool for measuring playfulness in parents (median age for mothers in the current study was 35 years). However, it was considered to be the best available measure and was beyond the scope of this study to develop an appropriate adult playfulness measure.

6.5.1 Adult playfulness: Issues around conceptualisation and measurement

The literature on adult playfulness is still very much in its infancy, with Guitard et al. (2005) identifying only eight studies in the area, most of which related to playfulness and performance at work. There has since been a proliferation of adult playfulness literature in the last decade, particularly spearheaded by Proyer and his colleagues (Proyer, 2011; Proyer, 2012a; Proyer, 2012c; Proyer, 2013). Attempts to conceptualise playfulness in adulthood have thus far been less successful than the operationalisation of the construct in childhood (Barnett, 2011b). The various ways in which adult playfulness is

operationalised is described in a systematic literature review by Mitchell et al. (2014b). From this review it appears that the construct of adult playfulness is still keenly contested. Consequently, the operationalisation of playfulness in the assessment used in this study will be examined in comparison with the current conceptualisations of playfulness that have more recently emerged.

Proyer and Jehle (2013), in a systematic review of the literature, highlighted some agreement in relation to a humorous or cheerful aspect of adult playfulness, but also the debate about whether the more intellectual aspects of playfulness should be included or not. However, it is worth noting that the Playfulness Scale for Adults used in the current study (Schaefer & Greenberg, 1997) did not include an intellectual-creativity aspect of playfulness as suggested by Proyer and Jehle (2013). When considering the use of the Playfulness Scale for Adults (Schaefer & Greenberg, 1997), one possibility is that it is not a true measure of adult playfulness, but rather may be measuring more specific constructs such as fun and spontaneity. However, Shen et al. (2014) did critique it for firstly being too narrowly focused on just one aspect of playfulness, that of fun-seeking; and secondly, for having limited generalisability because the behavioural indicators used were specific to certain situations such as building sandcastles. Further, the Playfulness Scale for Adults has five factors and yet it is scored using a single composite score. Shen et al. (2014) had critiqued the use of a single composite score in playfulness measures if the presence of an overarching dimension had not been substantiated.

A strength of the Playfulness Scale for Adults though seems to be that it focuses on the behavioural manifestations of playfulness, avoiding a combination of inner psychological constructs and behavioural indicators of playfulness, an approach that has been critiqued by Shen et al. (2014). The scores for adult playfulness in the current study were similar to that of the original validation study conducted with American college students, which does tend to support the reliability of the measure, however, this recent critique seems to bring its validity into question. The proliferation of literature in the area of adult playfulness seems to suggest that adult playfulness is much more complex and multi-faceted than initially thought when these early adult playfulness instruments were emerging (e.g. Glynn & Webster, 1992; Schaefer & Greenberg, 1997).

Given there is such recent debate in the literature about what constitutes adult playfulness, it is worth contemplating the possibility that adult playfulness is in fact a different construct to child playfulness. As discussed in Chapter 2, there is debate about whether playfulness is a personality trait as suggested by Barnett (1991a) and Lieberman, (1967) or whether it changes across the lifespan as a result of play taking on a less important role in adulthood (Guitard et al., 2005). Lieberman (1977) would argue that playfulness is an aspect of personality but that the social manifestations of playfulness change over time because of expectations to display socially acceptable behaviour. Solnit (1998), on the other hand, suggests that, while adults maintain their playful attitude and use it to facilitate different ideas, they become too critical as adults, and therefore tend to discard playful activities. Further, Casas (2003) found no evidence to suggest that there was a stable pattern of childhood playfulness into adulthood, and consequently queried the supposition that playful children could be expected to become playful adults. Solnit (1998) also suggests that adults seem to discard playful activities, but that they seem to channel their playfulness into generating creative ideas instead.

There would, therefore, seem to be some agreement that playfulness does in fact change from childhood to adulthood, at the very least in the way it manifests, and this is evidenced by the need for separate assessment instruments for children and adults. Kruger (1995) concurs with this argument, maintaining that playfulness is conceptualised differently in adults than children and that factors involved in playfulness should not build on those used for children because it is different in nature and complexity. Further, Staempfli (2007) emphasises the need for age-specific playfulness instruments to assist in accurate measurement of the construct.

Further support for the changing nature of playfulness throughout the lifespan is provided by the findings of a study by Proyer (2014). In a sample of 18- to 92-year-old adults, Proyer found that there were some differences in playfulness even between different adult age groups, however, these did not progress chronologically from young adult to older adult, and he found that there was no adult age-group that could be considered not to be playful.

While authors suggest that adult playfulness may well be a different construct to playfulness in children, it is worth considering the lack of relationship between adult and

child playfulness in the context of the playfulness measures used in this study. In examining playfulness in children, Skard and Bundy (2008) maintains that suspension of reality is an important component, and this includes elements of creativity such as using objects in unconventional ways as well as mischief making and clowning. Motivation is also an important component according to Bundy's conceptualisation, which incorporates aspects such as engagement in play as well as engaging in it for the process rather than just the outcome. The Playfulness Scale for Adults (Schaefer & Greenberg, 1997), on the other hand, focuses mainly on aspects such as fun-loving, humour, silliness, informality, and whimsicality. Some of these aspects may be reflected in the ToP element, *Freedom from the Constraints of Reality* especially in the items involving mischief/teasing and clowning/joking, as well as items from the *Intrinsic Motivation* element such as positive affect. Further, if we consider Guitard et al.'s (2005) finding of what comprises adult playfulness in their qualitative study, including deriving pleasure, creativity, spontaneity and curiosity, it would appear that aspects of creativity and curiosity are not incorporated in the Playfulness Scale for Adults. It is possible that a relationship between parent playfulness and child playfulness may exist if assessment of adult playfulness incorporated a broader conceptualisation of the construct to include curiosity and creativity, as suggested by Guitard et al. (2005) who highlight the pressing need for a sound measure of adult playfulness. As such, the more recent Short Measure for Adult Playfulness (SMAP) by Proyer (2012c) may be a more appropriate global measure of adult playfulness.

6.6 Parenting practices and playfulness in preschool children

There were no significant relationships between any of the parenting variables and the playfulness of preschool children. This is surprising given the links in the literature between parenting and developmental outcomes (Gutman & Feinstein, 2010; Magill-Evans & Harrison, 2001), and between parenting and play. For example, Hart et al. (1992) found an association between inductive discipline and greater levels of prosocial behaviour, so it might be expected that children whose parents were high on the reasoning and consistency variables might have higher playfulness scores based on better performance in the shared control area. However, reasoning is a contested construct in

the literature, with no association found between parent self-report of reasoning and observation of reasoning in parent-child interactions (Arney, 2004).

Authoritative parenting (that is high in warmth and consistent limit-setting) has been associated with children's playfulness (Van der Poel et al., 1991). Consequently, an association between children's playfulness and both warmth and consistency might have been expected. Further, in view of the association between hostile parenting and children's negative affect and emotional reactivity (Chang et al., 2003; Scaramella & Conger, 2003), a negative relationship between hostile parenting and children's playfulness might also have been expected. The relationships between secure attachment and emotion regulation discussed earlier in this chapter suggest a potential association with *Shared Control* items on the ToP. That is, the ability to regulate emotions is important for skills such as sharing, negotiating and initiating play. Further, positive affect is integral to playfulness, therefore, the negative affect associated with hostile parenting might have been expected to be evident in the findings. It is also important to note that the warmth variable was highly skewed. Parents may therefore have provided what they considered to be desired responses to warmth items so as not to appear as lacking in warmth.

The lack of relationship between playfulness and each of the parenting variables may be due to the relatively small number of items used within each variable to measure parenting. Consequently, the lack of variability of responses in the parenting scale items may have impacted on the lack of result. It could also be that different dimensions of parenting, and/or the more extreme ends of parenting not represented in this study, may have a greater influence on playfulness. As suggested by Gordon (2014), playfulness may well be the result of genetic endowment and environmental interaction, especially in relation to traumatic experiences, and these were not necessarily represented in this study. Further, observations of parents may yield more reliable and valid estimates of parenting behaviour, particularly in relation to inconsistent or permissive parenting (Arney, 2004).

6.7 Relationships in the *Integrated model of playfulness*

Support for the *Integrated model of playfulness* developed in Chapter 3 is far from convincing (see Figure 6.1). However, there are some encouraging trends. The small yet significant correlations between children's playfulness and both attachment behaviour and parent mind mindedness seem to suggest some support for the model. Unfortunately, the number and size of the relationships did not justify further complex statistical analysis. As discussed, the lack of relationship between children's playfulness and parent characteristics such as playfulness, warmth, consistency, reasoning and hostility may be the result of measurement issues and lack of variability in the data. For example, some of the parenting variables such as warmth (in which most of the responses were skewed to the positive), the size of the correlation will be reduced as a result of the reduced variability in the data (Goodwin & Leech, 2006). As environmental elements have a significant effect on observed playfulness in children (Bundy et al., 2008), it is unusual that no further relationships were found. However, it may be that there are other parent characteristics that influence playfulness. The clinical implications of these findings as well as recommendations for future research are discussed in Chapter 8 (refer to sections 8.2, 8.3 and 8.4).

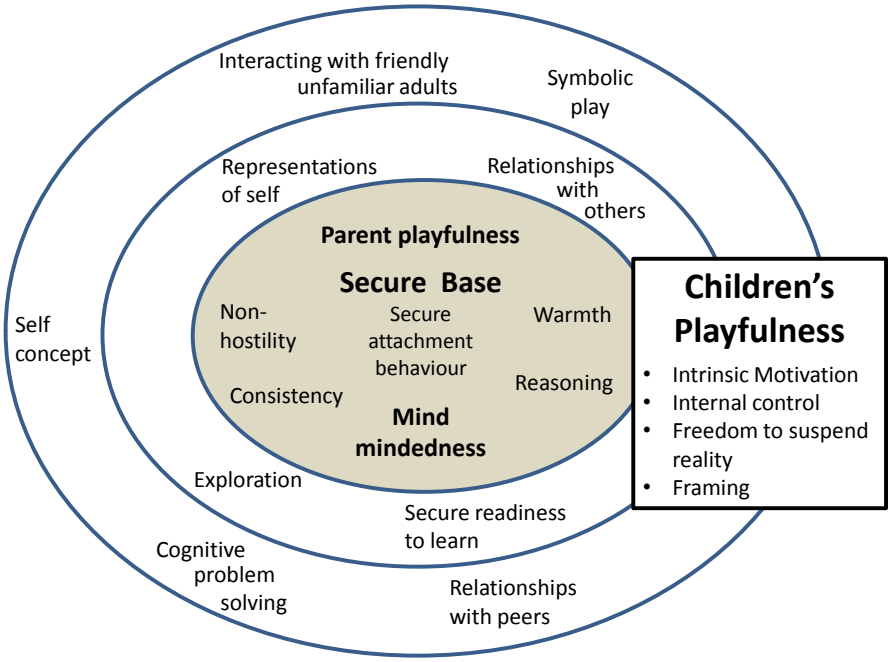


Figure 6.1 Integrated model of playfulness

6.8 Strengths and limitations

The strength of studies 1 and 2 is the use of multi-method and multi-informant design in order to reduce common method variance. Further, given that the response rates were low in study 1 and 2, particularly in lower SES areas, recruitment continued until the sample included a reasonable proportion of families from lower SES areas.

A limitation of the studies is that they are cross-sectional and are therefore unable to account for confounding variables. A further limitation of the studies within this thesis include the variability in the conditions under which children's playfulness was measured, the validity of the adult playfulness measure used (i.e. perhaps a different construct other than adult playfulness was measured), and the measurement of children's attachment behaviours rather than their actual security of attachment. The use of the outdoor play context, while advantageous in promoting playfulness, may have influenced the consistency of the setting. Many of these limitations were unavoidable given the logistical constraints of a PhD study, the limited funding, the assessment instruments that were available at the time, and the desire to limit the participant burden in terms of measures used.

6.9 Summary

The implications of the findings of studies 1 and 2 were outlined in this chapter, and in particular the methodological issues around the measurement of playfulness in both children and adults. The benefit of videotaping children in their preschools was that it was a familiar and comfortable environment, one that would presumably foster playfulness. However, the diversity in preschool environments, both in terms of the socioeconomic areas from which they were drawn and the amount of structure in the preschool programs, seems to have influenced the results. The measurement of adult playfulness in the studies has been complicated by the contention in the literature about the conceptualisation of playfulness in adults. As there was some promising support for some relationships in the model, further research is recommended, and this is discussed further in section 8.2. The next chapter presents study 3 in its entirety, with the relevant literature, method, results and discussion all contained within it.

CHAPTER 7 - STUDY THREE

Study 3 will be presented in this chapter, and the entire study will be contained herein. The aim of study 3 is to explore playfulness, mind mindedness, and the attachment behaviour of a small group of children who have experienced child abuse and/or neglect. The background literature of child abuse and/or neglect will be presented, particularly in relation to the impact on development and, in particular, play and playfulness. The remainder of the chapter presents the method used in the study, followed by the results and discussion. The discussion particularly focuses on the playfulness profiles of the children in the study in the context of the social and emotional impacts of child abuse and/or neglect as outlined in the literature.

The results of study 1 suggest there may be an association between a child's attachment behaviours and his or her playfulness. Attachment theory has been researched and built upon substantially through the study of families experiencing child abuse and/or neglect (also collectively referred to as maltreatment). Children from maltreating families are more likely to display disrupted attachment relationship patterns (D. Barnett et al., 1999). Research in the area of child abuse and neglect has established links between insecure attachment relationships and difficulties with exploration of the object world, symbolic play, problem solving, relationships with others and secure readiness to learn (i.e. being secure in relationships with adults) which in turn allows the child to feel able to venture out and explore the world (Aber & Allen, 1987). As discussed in Chapter 2, the individual must be in a relaxed state, free from external stress or threat in order for play to occur (Burghardt, 2005). "Feeling safe is the most basic prerequisite for a child to engage in play" (Cooper & Sutton, 1999, p.12). This then raises the question, what happens to play in children who are not free from external stress? Indeed, what happens to playfulness in children who live with a great deal of external stress, such as those who have experienced child abuse and neglect? Given the discussed associations between playfulness and coping skills (Hess & Bundy, 2003; Ruckser-Scherb, 2010; Saunders et al., 1999), it is important to examine playfulness in children who have experienced abuse and/or neglect. This chapter describes a pilot study designed to explore these questions in a subsample of preschool children.

7.1 Child abuse and neglect: An overview of the literature

Child abuse and/or neglect has different definitions throughout the world. Child abuse and/or neglect is defined by the South Australian 1993 legislation as follows: '***abuse or neglect***, in relation to a child, means—

(a) sexual abuse of the child; or

(b) physical or emotional abuse of the child, or neglect of the child, to the extent that—

(i) the child has suffered, or is likely to suffer, physical or psychological injury detrimental to the child's wellbeing; or

(ii) the child's physical or psychological development is in jeopardy' (Government of South Australia, 2015, p.8).

Higgins (2004) drew attention to the contention in the literature with regard to differentiating between specific types of abuse and neglect. He suggested that individuals frequently experience more than one type of abuse, and that the practice of differentiating between types of abuse can therefore be problematic. Five sub-types of abuse have been identified in the literature, including: physical abuse, psychological abuse comprising emotional abuse and psychological neglect, sexual abuse, neglect, and witnessing family violence (Higgins & McCabe, 2000). Higgins (2004) raised the question as to whether one overarching construct of maltreatment may be worth considering, but also highlighted the need for research to consider the specific impact of both the sub-type of abuse as well as the extent of abuse. Consequently, the definitional issues around child abuse and neglect are complex, and terms such as *maltreatment* and *child abuse and neglect* are used to describe collective experiences of abuse.

The impact of child abuse and neglect has been systematically researched for over fifty years (Christoffersen & DePanfilis, 2009). While early authors such as Bakwin (1949) discussed the consequences of emotional deprivation in infancy, child abuse and neglect received a higher profile when Kempe, Silverman, Steele, Droegemueller, and Silver (1985) first described the 'battered child syndrome' in 1962. Since this time, the detrimental impact of child abuse and neglect on young children has been well

established and documented (Glaser, 2000; Mullen et al., 1996; Wright, 1994). While the results of physical injury and physical neglect are clearly obvious, there is now also mounting evidence of the neurological impact of environmental influences such as stress and trauma on children (Schore, 2001).

Shonkoff (2010) provides an excellent description of the neurobiological advancements in child development research which provides persuasive evidence of the adverse impact of traumatic experiences on brain development. Living with toxic stress can occur for a child through ongoing physical and/or emotional abuse, chronic neglect, parental substance abuse and other conditions such as living with severe poverty, maternal depression or family violence (Shonkoff, 2010). The other key aspect of toxic stress is that the child does not have access to the protective support of a stable adult, and so the body's stress-response systems are activated intensely, frequently and/or in a prolonged manner. The stress response is impacted by neural networks that connect four distinct areas of the brain (brainstem, diencephalon, limbic and cortical) (Gaskill & Perry, 2014). Experiences such as early attachment issues and traumatic stress can result in dysregulation of these networks, which in turn influences a child's motor, social, emotional and cognitive functioning (Gaskill & Perry).

In the case of tolerable stress (which may be brought on for example by death of a parent, parental divorce or a natural disaster) or positive stress (elicited by situations such as a transition to child care or dealing with frustration), the child's stress-response system has the opportunity to be restored to baseline by the support of a stable adult (Shonkoff, 2010). The return to baseline stress response then promotes adaptive coping in the child. Moderate activation of the stress response networks thus provides an opportunity to demonstrate resilience (Gaskill & Perry, 2014). With regard to severity of stressors, relational trauma within a child's social environment would seem to result in a greater impact on the child's brain compared to nonhuman stressors (Schore, 2002). Toxic stress results in fluctuating cortisol levels which damage neural circuits in the hippocampus causing disruptions to brain architecture which may in turn result in cognitive impairments and may impact on the body's organs resulting in long-term stress-related conditions (Shonkoff, 2010).

The effects of child abuse and neglect are both short- and long-term, and influence numerous domains of development across all developmental phases (Toth & Cicchetti, 2006). Child abuse and neglect impacts on physical aspects such as height and head circumference (Pears & Fisher, 2005), cognitive functioning such as problem solving (Aber & Allen, 1987; Pears & Fisher, 2005), and language, for example, expressive syntax and displays of illogical thinking such that the child has difficulty in formulating ideas and verbalising them in a logical way (Coster, Gersten, Beeghly, & Cicchetti, 1989; Eigsti & Cicchetti, 2004; Pears & Fisher, 2005; Toth, Stronach, Rogosch, Caplan, & Cicchetti, 2011). The impact of child abuse and neglect on socioemotional development and psychological adjustment is pervasive, and influences attachment relationships, emotion recognition, regulation and expression, self-system development, peer relationships, romantic relationships and school functioning (Cicchetti & Valentino, 2006; Cicchetti, 2010).

Child abuse and neglect has also been associated with reduced health-related quality of life (Afifi et al., 2007). It has been linked in the literature with long-term physical and mental health conditions which persist into adulthood, such as arthritis, high blood pressure, asthma, bronchitis, autoimmune disorders, cancer, post-traumatic stress disorder, dissociative disorders, anxiety, phobias, substance abuse, increased risk of suicide and depression (Child Welfare Information Gateway, 2008; Mulvihill, 2005; Putnam, 2006; Springer, Sheridan, Kuo, & Carnes, 2007). Shonkoff (2010) explains this relationship between maltreatment and chronic disease, stating that an abusive and threatening early interpersonal environment can impact on brain development and biological functions such as how the child manages stress, regulation of metabolic, endocrine, neurologic and cardiovascular systems, making the child more vulnerable to a range of chronic diseases in adulthood.

Many early studies of child abuse and neglect investigated its impact on single developmental domains, with Aber and Allen (1987) drawing attention to the lack of studies using appropriate developmental frameworks to investigate the inter-relationships of the findings. Their concern has now been addressed by the emergence of many multi-faceted studies, a number of which are discussed in a review of the abuse literature pertaining to preschoolers (Wright, 1994). Attachment theory is a particularly pertinent theory by which to examine the issue of child abuse and neglect because an insecure attachment is considered to be a potential outcome of infants who are exposed

to fear, rejection, absence of parental response, and inconsistent care (Aber & Allen, 1987; Carlson, Cicchetti, Barnett, & Braunwald, 1989; Wright, 1994). The early part of this chapter will explore key developmental impacts of child abuse and/or neglect, and specifically the impact on play, especially given the paucity of literature on playfulness. This exploration of developmental impacts provides an important context for discussing potential connections with the elements of playfulness in section 7.6.3.

7.2 Impact of abuse and neglect on cognition and social and emotional development

Neurobiological research has been used to try to explain many of the cognitive, socioemotional and psychopathological impacts of child abuse and neglect. Cognitive processing and emotion regulation are typically examined separately in the maltreatment literature, but it is highly likely that cognitions and emotions interact strongly with each other (Lee & Hoaken, 2007), which is why these cognitive and socioemotional processes are addressed together here. One of the difficulties in unravelling the social, emotional and cognitive processes affected by child abuse and neglect is that different terminology is used to discuss the same processes (Lee & Hoaken, 2007). Lee and Hoaken discuss the impact of maltreatment on executive functions, that is, higher-order abstract processes that are often explored in the literature such as: vigilance and distractibility; visual scanning; selective attention; planning and organisation; and response inhibition.

7.2.1 Hypervigilance

One of these impacts which is addressed extensively in the literature is hypervigilance, that is, having an increased level of arousal and being hyper-responsive to hostile, aggressive or ambiguous cues (Frankel, Boetsch, & Harmon, 2000; Toth et al., 2011). Children who have experienced abuse are constantly scanning the environment for signs of threat, which may result in not adequately attending to relevant non-hostile cues (Dodge, Pettit, Bates, & Valente, 1995). This in turn creates difficulties in attaining the quiet, alert state that facilitates learning (Frankel et al., 2000). Children in a hypervigilant state seem to have difficulty focusing on positive and benign situations because their adaptive response is to focus on negativity in order to detect a perceived threat (Dodge et

al., 1995; Toth et al., 2011). Hypervigilance thus detracts from the child's ability to attend to activities such as play and inhibits curiosity as he or she is constantly monitoring the environment (Cooper & Sutton, 1999).

Lee and Hoaken (2007) propose that this selective attention bias for signs of threat could plausibly disrupt a child's ability to consider another person's perspective or to maintain attention to another person in an interpersonal interaction, especially given that they are distracted or overwhelmed by the potential danger. This heightened sensitivity to detecting fear or anger would seem to be adaptive in an abusive family environment as it helps the child to quickly detect threat (Masten et al., 2008). However, it would seem to be maladaptive in non-threatening settings, because effective emotional self-regulation requires control over attending to threatening cues (Masten et al., 2008). Therefore, it also follows that successful self-regulation is necessary in order to focus on relevant and benign stimuli which may facilitate learning. A study by Pollak, Vardi, Putzer Bechner, and Curtin (2005) noted that maltreated preschoolers, when compared to non-maltreated preschoolers, had a heightened level of physiological signs of arousal such as heart rate in response to an argument between two unfamiliar adults.

7.2.2 Social competence

Child abuse and neglect has been shown to impact on social functioning, and in particular, may impact by limiting prosocial behaviour, and increasing withdrawn and/or disruptive/aggressive behaviour (Alink, Cicchetti, Kim, & Rogosch, 2012). Social information processing would also seem to be a contributing factor to the difficulties in prosocial behaviour (Dodge, Pettit, & Bates, 1997). Because maltreated children tend to have a negative attribution bias (i.e. they are likely to attribute hostile intent to an individual approaching them, even if in a benign way), they are less accurately able to process social cues, which results in more aggressive responses to problematic social situations (Cicchetti & Valentino, 2006; Dodge et al., 1997). The literature also differentiates between reactive aggression which is described as impulsive retaliation to a perceived threat and proactive aggression in which the aggressive behaviour is purposeful and aimed at achieving a desired outcome (Lee & Hoaken, 2007). Dodge et al. (1995) would seem to be referring to proactive aggression when explaining that many maltreated children may find their aggression to be productive in getting their own way

and may also enjoy the feeling of being aggressive. Lee and Hoaken (2007) on the other hand discuss the reactive aggression that is often displayed by children who have experienced maltreatment, as this would seem to be the most closely related to emotional dysregulation (which is discussed below). Further, the impacts of aggressive behaviour seem to be dire, as individuals with impulsive aggression (in which the emotionally aggressive display is out of proportion to the precipitating event) have been found to have greater difficulty with tasks involving planning and organisation (Lee & Hoaken, 2007; Villemarette-Pittman, Stanford, & Greve, 2003).

These social difficulties are of particular interest when considered in light of the recent research conducted in relation to social functioning and cortisol levels (Alink et al., 2012). Difficulties in social functioning seem to exacerbate changes in the regulation of cortisol levels for maltreated children when compared with nonmaltreated children (Alink et al., 2012). Research has shown that peer rejection is associated with higher cortisol levels in preschoolers in peer-group settings (Gunnar, Sebanc, Tout, Donzella, & van Dulmen, 2003) which may help to explain that maltreated children with limited prosocial behaviours may find social situations threatening because of the risk of rejection (Alink et al., 2012). Given that prosocial behaviour is related to emotional understanding, emotionality and the ability to display positive emotion (Denham, 1986), it is also important to explore the emotional functioning of children who have experienced abuse and neglect.

7.2.3 Emotional development

The impact of child abuse and neglect on emotional development is cumulative, with greater deleterious effects occurring as a result of greater incidence and severity of abuse (Dodge et al., 1997; Toth & Cicchetti, 2006). Areas of emotional development affected include: difficulties with emotion regulation and recognition, including a heightened sensitivity to detecting anger (Camras, Ribordy, Hill, & Martinoy, 1990; Cicchetti & Valentino, 2006; Pollak, 2008). It is suggested that these children respond to signs of threat rapidly and vehemently, may find it difficult to refocus their attention away from their anger, and may also then retaliate to perceived provocation (Cicchetti, & Valentino, 2006; Dodge et al., 1995). It has also been documented that, during free play activity, maltreated children tend to display inappropriate affect relative to nonmaltreated peers

(Shields, Cicchetti, & Ryan, 1994; M. Smith & Walden, 1999). This is of concern because children who are better at regulating negative emotions display greater social competence in peer interactions (Calkins, Gill, Johnson, & Smith, 1999; Kim & Cicchetti, 2010). Conversely, children with poor emotional regulation (such as controlling attention and behaviour) are at risk of maladaptive social functioning and victimisation from peers (Hanish et al., 2004; Kim & Cicchetti, 2010). Therefore, this limited ability to regulate emotions with peers may contribute to some of the documented social difficulties that may arise from child abuse and neglect. This notion is supported by the strong empirical association found between emotional competence and social competence in typically developing preschool children (M. Smith & Walden, 1999) highlighting the importance of emotional competence and regulation for the formation of successful peer relationships.

When considering emotional development, it is important to acknowledge the role of a caregiver's tolerance of and reaction to displays of affect, as this has a profound influence on a child's "emotional experience, expressiveness and arousal" (Valentino, Cicchetti, Toth, & Rogosch, 2011, p.143). Given the disturbed interpersonal environment that may exist in maltreating families, it is not surprising that maltreatment negatively impacts on emotional development and regulation (Valentino et al., 2011). Children with emotion dysregulation display emotional reactivity, reduced ability to empathise, and their affective displays tend to be inappropriate to the context (Kim & Cicchetti, 2010). It would seem that maltreated children do not receive adequate support when upset, and so become overwhelmed by emotional arousal, resulting in difficulties managing and understanding negative emotionality (Kim & Cicchetti, 2010). It is also interesting that amongst carers and professionals working with children in out-of-home care (foster and kinship care), there is a perception by different stakeholders that those from other disciplines may have incorrect, ineffective, punitive or unsuitable perceptions of misbehaviour and approaches to management (McLean, 2012). Given the different perceptions of and responses to misbehaviour, this would seem to support the idea that these children may not receive adequate support. The differences in emotion expression between maltreated and nonmaltreated children have been observed as young as three months of age, with increased fearfulness, anger and sadness observed in physically abused infants during mother-child interaction (Cicchetti & Valentino, 2006; Gaensbauer, Mrazek, & Harmon, 1981). This is particularly significant given that, in typical

development, these effects do not usually appear until seven to nine months of age (Cicchetti & Valentino, 2006; Sroufe, 1997).

Cicchetti and his colleagues proposed that the stress associated with the experience of maltreatment may impact on a child's understanding and interpretation of emotional displays (Curtis & Cicchetti, 2003; Toth & Cicchetti, 2006). While M. Smith and Walden (1999) found no significant differences in recognition of emotion between maltreated and nonmaltreated preschoolers, there is, nevertheless, persuasive empirical evidence to suggest that maltreatment does impact on recognition of emotion (Camras et al., 1990; Shields et al., 1994). Various studies have found that maltreated children are quicker than nonmaltreated children at identifying negative facial emotions such as fear, anger and sadness (Leist & Dadds, 2009; Masten et al., 2008). While maltreated children are quick to identify anger, a study of high-risk adolescents found that they have impaired ability to recognise anger, particularly because they frequently identified neutral expressions as angry ones (Leist & Dadds, 2009). This would seem to be consistent with other findings indicating that the impact of maltreatment would seem to be that of increasing responsiveness to angry stimuli in comparison to happy stimuli (Cicchetti & Curtis, 2005; Toth & Cicchetti, 2006).

7.3 Impact of child abuse and neglect on play

While many developmental and psychosocial impacts of child abuse and neglect have been comprehensively investigated, there is comparatively less research of its impact on children's play (Cooper, 2000a; Darwish et al., 2001). This is surprising, especially given the potential impact of hypervigilance and difficulties in self-regulation on effective engagement in productive play, especially playing with others. Studies have tended to examine the impact of child abuse and neglect on specific aspects or contexts of play such as developmental play ages, cognitive aspects of play, themes of play and mother-child interaction during play (Fagan & Dore, 1993; Harper, 1991; Howard, 1986; Valentino et al., 2006).

In one of the early occupational therapy play studies in the child abuse area, Howard (1986) examined the play of 12 children (1-5 years of age) who had experienced physical abuse compared with 12 children who had not, although there was no indication of how

the physical abuse was ascertained in the study. Children in the abuse group had play ages that were 8.4 months below their chronological ages, and this was a significant difference compared with the control group ($p<.05$).

A study by Harper (1991) of 160 children between the ages of 3.5 and 10 years examined play themes amongst children who had experienced different types of abuse, including physical abuse (n=40), sexual abuse (n=40), physical and sexual abuse (n=40), and a control group (n=40). The themes of the physical abuse group related to aggression and disorganisation, the sexual abuse group displayed themes often of a sexual nature and a desire for protection and nurturance, the control group largely had domestic themes as well as elaborate fantasy themes, while the sexual and physical abuse group displayed quite diverse themes.

7.3.1 Attachment and independent play

Child abuse and neglect has also been found to impact on independent play, with children displaying greater dependency on adults in their play (Aber & Allen, 1987; Valentino et al., 2006). It seems that these children feel less secure readiness to learn, that is, they do not feel secure enough in a safe relationship with an adult to be able to head out to explore the world (Aber & Allen, 1987). Blehar et al. (1977) found that maternal playfulness was highly associated with a secure attachment in children at 12 months of age. In fact, much of the research advancement within attachment theory occurred within the maltreatment literature because it was expected that an insecure attachment would be observed in infants who experienced inconsistent care, fear, rejection, or lack of parental response (Aber & Allen, 1987; Carlson et al., 1989; Wright, 1994). Cicchetti and Toth (2005) maintained that the rate of insecure attachment in the abuse population could be up to 95 per cent, with a particular predominance of a disorganised attachment relationship. Given these high rates of insecure attachments within the abuse population, it could be expected that many of the impacts on play observed within the attachment and mind mindedness literature would also be evident in children who have experienced child abuse and neglect. For example, as discussed in Chapter 3, insecure attachment and/or decreased parental mind mindedness have been associated with reduced exploration of the environment (Seifer & Schiller, 1995), the development of symbolic

play (Meins et al., 1998), and the emergence of solo pretend play (Belsky et al., 1984; Meins et al., 1998).

To assist in conceptualising play in children who have experienced child abuse and/or neglect, Cooper (2000b) developed a model by which to conceptualise all the aspects of play. The model divided children's play into developmental play capacities (cognitive, physical and social play skills) and individual play styles (internal control, freedom to suspend reality and intrinsic motivation). He also incorporated the play environment and the cultural and family milieu into the model. The impact of child abuse and neglect on children's play skills will be considered in this section according to Cooper's categories: cognitive, physical and social play skills. Individual play styles will be addressed later in the chapter under 'playfulness', as internal control, freedom to suspend reality and intrinsic motivation are all elements of what Bundy (2004) refers to as playfulness.

Children who have experienced abuse have been clinically observed to have difficulties in their play, namely problems completing planned activities, inability to functionally use toys and materials to their full extent, difficulty initiating and organising play, engaging in repetitive play, switching play activities frequently, difficulty developing play themes and in maintaining focus on play materials (Caughey, 1991; Cooper & Sutton, 1999). Clinical observations have also documented that children who have experienced abuse and neglect display less spontaneous enjoyment or pleasure in their play (Cattanach, 1992).

7.3.2 Maltreatment and cognitive play skills

Play is often used as a way of viewing a child's early cognitive and social development in the child abuse and neglect literature (Valentino et al., 2006). Alessandri (1991) conducted a study of social and cognitive play with 30 preschoolers, 15 with a history of abuse (physical, emotional, sexual and/or neglect) and 15 without. He found that preschool children in the maltreatment group had less mature cognitive and social play patterns, displayed more aggression and engaged in more transitional behaviour rather than play. Children who have experienced abuse were found to engage in less play but engaged in more sensorimotor activity or functional use of toys rather than symbolic use of objects (e.g. touching and banging rather than direct manipulation of objects), more stereotypic use of play objects, repetitive movements and more transitions (i.e.

transitions between play activities) than their non-abused peers (Alessandri, 1991). Children without a history of maltreatment engaged in more purposeful, organised play and participated in more constructive play. On the basis of Alessandri's findings it could be expected that children who have experienced maltreatment may be at risk for low levels of playfulness, particularly in relation to engaging playfully with others, and needing to share, negotiate, enter into play with others and transition readily between activities.

When Cooper (2000a) studied 55 children who had experienced child abuse and/or neglect compared with a control group, he found that they had delayed cognitive play skills, and displayed a decreased use of adaptive play materials. He also found that children in the abuse group engaged in less pretend play and construction play. Pretend play incorporates: (a) object substitution (the ability to use an object to represent another object, such as pretending a box is a car), (b) pretending objects have imaginary properties, and (c) creating nonexistent imaginary situations, that is, creating a different reality to the situation at hand (Dore et al., 2015; Leslie, 1987). While pretend play is therefore a broader concept than freedom to suspend reality, Cooper's results may, nevertheless, be suggestive of difficulties with playfulness in relation to freedom to suspend reality.

A study by Valentino et al. (2006) of 130 infants (11 months to 15 months) compared the play behaviour of 78 infants who had experienced maltreatment compared with 52 infants who had not. In contrast to Alessandri's (1991) results, the authors found no differences between groups in the cognitive elements of play complexity. They did, however, find that infants from the abuse group engaged in more imitative play and less independent play than did infants from nonmaltreating families. Valentino et al. (2006) suggested that imitation requires less active involvement than do child initiated behaviours. They also hypothesised that the lack of difference between groups in play complexity may have been because of the age of the children (around 12 months), and that perhaps maltreatment does not impact on sensorimotor play that is pre-symbolic.

7.3.3 Maltreatment and physical play skills

An early study of motor coordination in the child maltreatment literature examined 65 families in the maltreatment group and 50 comparison families (Hughes & Di Brezzo, 1987). Findings indicated that parents of children who have experienced child abuse and/or neglect reported poor motor coordination skills when compared with nonabused peers (Hughes & Di Brezzo, 1987). However, these results should be interpreted cautiously because the maltreated group were not identified using a consistent method. Further, the results were based on parent report rather than observation.

There have generally been few studies conducted on the impact of maltreatment on physical play capacities. In his study of 55 children who had experienced child abuse and/or neglect, Cooper (2000a) found that the children had significantly reduced gross and fine motor skills in relation to a matched comparison group. Cooper also found that the children in the abuse group tended to avoid construction play, and potentially this may have been contributed to by delays in motor skills.

7.3.4 Maltreatment and social play skills

In Alessandri's (1991) study discussed above, he also found that, while there were no differences in solitary play between the maltreatment group compared with the nonmaltreatment group, there were significant differences in parallel and group play. The maltreated preschool children engaged in less parallel and group play, displayed less competence with peers, maintained less involvement with play materials, and engaged in minimal peer conversation, displaying aggression and frequent play transitions. Cooper (2000a) also examined social play skills in the children in his study, and found that the abuse and/or neglect group tended to display less spontaneous verbal interaction with adults, and there was less adult-child cooperation compared with the non-abuse group.

Darwish et al. (2001) examined play and social skills in 15 children who had experienced maltreatment compared with 15 with no history of abuse. However, maltreatment type was not differentiated, although the authors did consider that the clinical group were representative of a range of abuse experiences, including different types and severities, with a predominance of emotional abuse. Darwish et al. (2001) measured play behaviours by observing for social play (solitary, parallel or group play), cognitive play

(exploratory, functional, constructive or dramatic), and non-play (onlooking, aggressive and transitional behaviour). The study found no significant differences between groups in play behaviour. However, there were between-group differences in social skills, as maltreated preschool children were found to initiate fewer interactions with their peers, and also showed more limited self-control in situations of conflict with their peers (Darwish et al., 2001). These two social areas would seem to be related to the child's play style or their playfulness.

7.4 Child abuse and neglect and playfulness

While the impact of child abuse and neglect on individual aspects of play have been investigated, there is comparatively little research of its impact on global aspects of children's play (Cooper, 2000b). Cooper's (2000a) inclusion of play styles in his study began to address a major gap in the child abuse literature. The three aspects included in play style (i.e. internal control, freedom to suspend reality and intrinsic motivation) make up three out of four components of Bundy and colleagues' conceptualisation of playfulness (Bundy, 2004; Harkness & Bundy, 2001; Morrison et al., 1991).

In his comprehensive study of the global aspects of play, Cooper (2000a) found a number of play deficits in maltreated children in his study, as discussed above. However, Cooper was not able to establish a relationship between child abuse and playfulness. He proposed that the measure used in his study, the Children's Playfulness Scale (Barnett, 1990), may have been problematic because of its reliance on parental report of playfulness, and that reliability of the measure had only been established with normative, non-clinical populations. Cooper questioned the perceptions of care-givers of maltreated children with regard to rating playfulness accurately. Playfulness, defined as a child's disposition to play (Barnett, 1990) or approach to play (Bundy, 2005), is consequently a key concept lacking in the child abuse and neglect literature.

As described above, Cooper (2000a) also examined some aspects of play style which are consistent with the elements of playfulness. When examining internal control in the children in his study, Cooper found that children in the abuse and/or neglect group had reduced play organisation skills and decreased skills in material management compared with non-abused peers. In relation to freedom to suspend reality, in the abuse group

Cooper found less imitative and imaginative play, as well as increased aggression in play amongst boys. Within Cooper's final element of play style, that of intrinsic motivation, Cooper found that children in the abuse group showed less concentration in their play compared with non-abused peers, and also displayed less enjoyment in their play, with fewer positive displays of affect such as joy, eagerness or interest.

7.4.1 Measuring playfulness in children who have experienced child abuse and neglect

Given the lack of consideration of playfulness in the child abuse and neglect literature, it is important to examine playfulness because of its links to divergent thinking, coping ability and problem solving skills (Barnett & Kleiber, 1982; Hess & Bundy, 2003; Lieberman, 1965), as these are all important attributes for children who have experienced abuse and neglect. Given these associations with coping skills, playfulness may well provide an important link to resilience in these children. An exploration of resilience is beyond the scope of this thesis, as it comprises a comprehensive range of factors both within the child and in the context of their environment. Refer to Afifi and MacMillan (2011) for a review of the protective factors that seem to promote resilience after experiencing maltreatment.

The documented difficulties in self-regulation by children who have experienced child abuse and/or neglect as discussed above, place them at risk within their play, as they are not able to display the internal control needed at times to inhibit responses to cues that they perceive as dangerous. As discussed in Chapter 2, there are various ways of conceptualising playfulness. However, for the purposes of this research, the concept of playfulness used is that described by Skard and Bundy (2008), as the research literature has repeatedly confirmed the reliability and validity of the ToP (Fabrizi, 2014; Brentnall et al., 2008; Bundy, 2005). As discussed in Chapter 2, while the items of the ToP (Bundy 2004) form all one construct, it is useful to consider them within the four major elements used to construct the test; freedom to suspend reality, internal control, intrinsic motivation, and framing. In Chapter 5, Table 5.9 indicates the items of the ToP as they relate to each of the elements, and each of the items are explained in appendix 6.

In view of the documented impacts of child abuse and/or neglect on socioemotional development, when examining specific aspects of playfulness as measured by the ToP, it could be theorised that certain items would be difficult for children who have experienced child abuse and/or neglect, and these are presented in Table 7.1. The remainder of this chapter involves an in-depth exploration of the measurement of playfulness, mind mindedness, and attachment behavior of a small group of children who have experienced child abuse and/or neglect. This study also compares their playfulness with children who have not previously experienced maltreatment. Given this theoretical connection between aspects of playfulness and social and emotional difficulties, this pilot study is exploratory in nature, and will examine the following questions:

How does playfulness present in children who have experienced child abuse and/or neglect?

What might be the observed relatedness between children's playfulness, their attachment behaviour and the mind mindedness scores of their caregivers?

Table 7.1 ToP items that may be potentially difficult for children who have experienced abuse and/or neglect based on the literature

Impact of child abuse and/or neglect	ToP items that may be difficult
Difficulties in prosocial behavior (withdrawn behavior or aggressive behavior; less initiation of interactions with others); retaliates to perceived provocation; less self control during conflict (Alessandri, 1991; Cicchetti & Valentino, 2006; Dodge et al., 1997)	Enters (play with others) Initiates (activities with others) Social play (extent, intensity and skill) Negotiates (to have own needs met) Shares
Hypervigilance and negative attribution bias (Dodge et al., 1995; Dodge et al., 1997)	Responds to cues Social play (extent, intensity and skill)
Difficulty with emotion regulation and recognition (quicker to identify negative facial emotions such as fear, anger and sadness) (Cicchetti & Valentino, 2006; Pollak, 2008)	Responds to cues Negotiates
Engages in less play (engages in more sensorimotor activity or functional use of toys) and more transitions between play activities (Alessandri, 1991)	Interacts with objects Incorporates (objects or people into play in unconventional ways; creativity) Transitions between activities
Less elaborate fantasy themes (Harper, 1991)	Pretend play (skill) Incorporates
Less independent play (Valentino et al., 2006)	Engaged (extent, intensity and skill) Decides
Less secure readiness to learn (Aber & Allen, 1987)	Feels safe (sufficiently enough to engage in play)
Less pleasure experienced in play (Cattanach, 1992)	Affect (shows positive affect during play) Process (engages in activity for pleasure of it – process – rather than the end product)

7.5 Method

7.5.1 Research design

A multiple case study design was used to make descriptive comparisons between data from this study and the data from study 1. Multiple case study design allows the researcher to compare within and across cases, and allows exploration of a specific

phenomenon using a number of cases (P. Baxter & Jack, 2008; Yin, 2013). The play profiles of each of the five children in the study were examined, and the mean raw scores for each item on the ToP for each child were compared to the raw scores for each item from study 1. Similarly, the mind mindedness scores and the ADC scores for individual children in study 3 were compared with the mean scores from study 1.

7.5.2 Ethical approach

Prior to recruiting the sample, ethics approval was gained from the University of South Australia's Human Research Ethics Committee. Ethical clearance was also granted by the Families and Communities Research Ethics Committee, Department for Communities and Social Inclusion (see appendix 18) which enabled recruitment of participants from Families SA[4]. Permission was also granted from the Department of Education and Children's Services (DECS: Community and Tertiary Liaison) in order to conduct the study in DECS preschools.

7.5.3 Participants

Five participants and their parents/caregivers were recruited: two were identified through study 1 after meeting the criteria for this study and were excluded from study 1 and 2; three were recruited through Families SA offices. Children were included in the study if they were 4-years-old or had recently turned five, attended preschool or child care (to ensure that there was an environment in which to videotape play that would be comparable to the preschool environments in the first study), had no known neurological impairments, and had a substantiated notification of child abuse and/or neglect to Families SA. The study was conducted in English, so as for study 1, non-English speakers were excluded from the study because of difficulty completing questionnaires and understanding information sheets written in English. Initial inclusion criteria also involved children living with a natural parent as this would have enabled exploration of the relationship between children's playfulness and mind mindedness in these families. However, this inclusion criteria was amended later in the process when it became clear

[4] The statutory child protection organisation in South Australia

that it was too difficult to recruit families in which child abuse and/or neglect was occurring whilst the child still remained in the care of the family.

The average age for the 5 children was 52 months (SD 2.92), with a range from 48 to 56 months, however, specific ages are not listed for each child in order to preserve anonymity. Table 7.2 presents the characteristics of participants in study 3, and pseudonyms are used to preserve confidentiality. The participants included three girls and two boys.

Table 7.2 Characteristics of participants in study 3

	Amy	Zoe	Josie	Ben	John
Gender	Female	Female	Female	Male	Male
Living arrangement	With natural mother	With natural mother	With a family member	Foster care	With a family member
Length of time in out-of-home care (where relevant)[5]			3 years	6 months	12 months
Experience of abuse	Emotional abuse, witnessing violence	Emotional abuse, witnessing violence	Neglect and parental substance abuse	Emotional abuse and neglect	Neglect and parental substance abuse

7.5.4 Procedures and measures

After receiving ethical clearance from Families SA (refer to appendix 18) and the University of South Australia, emails were sent to Families SA offices requesting assistance with recruitment. Follow up telephone calls were made to managers of Families SA district offices by the researcher, and recruitment details were also published in Exchange, a monthly newsletter published by the Research Unit at the Department for Families and Communities. Families SA managers of district offices who agreed to participate then approached their staff to help recruit families. An information sheet was

[5] Out-of-home care refers to children who have been taken into care of the Minister for Families and Communities, and may be placed in an alternative care arrangement such as foster care or kinship care (with another family member).

provided to Families SA case workers (appendix 19) to provide them with information about the project and eligibility criteria for families. District staff approached families, sent them an information package (appendix 20) and then gained informed consent (appendix 21) from the families who volunteered to participate.

The measures are described in study 1 and 2, and were again selected to decrease the likelihood of common method variance. The assessments were administered through a range of methods so as to balance the time commitment involved for participants and their families. Measures conducted included:

- the demographic questionnaire, completed with caregivers (refer to appendix 22)
- the mind mindedness measure, completed by caregivers
- the Test of Playfulness, conducted by an observation of children (appendix 6)
- the Brief Developmental Checklist, completed by teachers (appendix 7), and
- the Attachment Disorder Checklist, completed by teachers (appendix 8).

After receiving informed consent, the researcher contacted families and invited the primary caregiver to attend an interview at a mutually convenient time at the child's preschool. The demographic questionnaire was administered via interview with the caregiver (using the 'About your family' section of the parent booklet from study 1 – refer to appendix 22) and to administer the single question measure of mind mindedness which was audiotaped with consent (both described in study 2). The demographic questionnaire was administered in person in this study in order to provide an opportunity to develop rapport, to administer the mind mindedness single question interview and to answer participant questions. Participants were also shown the ToP score sheet so that they are aware of what the observation of their child would involve. Interviews generally took 15-30 minutes to conduct.

Prior to the interview, caregivers were informed about the researcher's statutory mandatory notification obligations that apply to all people who have contact with children in a formal capacity in South Australia. At the end of the interview, all participants received a package of information including a parent Easy Guide from

Parenting SA with useful information about early learning and play, and details of the Parent Helpline and Parenting SA (refer to appendix 15).

The ToP was then conducted with each child at the preschool. Note that consent was also obtained to videotape the playmates of participants, as for study 1 and 2. The children were videotaped during one outdoor observation of time spent in free play. Caregiver interviews were conducted on the same day as videotaping the child's play. As for study 1 and 2, the videotapes were scored by an independent and callibrated rater who was not aware of the maltreatment status of the children.

Preschool teachers were asked to complete a Brief Developmental Checklist and the ADC at times convenient to them, preferably on the same day as the child's assessment. All assessments were either completed on the day or sent within two days afterwards.

7.6 Results and discussion

The results and discussion are presented together in this section to promote ease of interpretation for the reader. The playfulness scores of the five children in this third study were examined in comparison with children in study 1 (n=118) who were recruited through DECS preschools. The scores for each of the children in the ToP (both raw score and total Rasch score), the ADC and mind mindedness are presented in Table 7.3.

Table 7.3 Top raw scores, ToP total scores, ADC scores and mind mindedness scores for each of the children

	Amy	Zoe	Josie	Ben	John	Study 1 Mean	Study 1 SD
Total raw score	27	24	32	25	34		
Rasch Total Score for ToP	-2.52	-2.60	-1.33	-2.52	-1.70	-.67	1.49
ADC score	14.44	13	12.22	14.44	26	16.45	4.61
Mind Mindedness score	.333	.133	.192	.5	.167	.33	.16

Table 7.4 contains the item raw scores for each of the five children. The playfulness profiles will now be discussed in relation to further observations from the video. With

regard to each of the children, they will be discussed in relation to individual items with which they seemed to have difficulty, namely those items which were below 1 SD from the mean of study 1. This analysis of item raw scores is complemented by observations from the videos of each of the children's play.

Table 7.4 ToP Item scores for five children in order of relative difficulty of items according to the ToP manual

Items in order of difficulty according to ToP manual	Amy	Zoe	Josie	Ben	John	Study1 Mean	Study1 SD	Element
Feel safe (extent)	3	3	3	3	3	2.96	0.20	Control
Decides (extent)	3	3	3	3	3	2.88	0.33	Control
Process (extent)	3	3	3	2	3	2.87	0.34	Motivation
Engaged (extent)	3	3	3	2	2	2.7	0.46	Motivation
Transitions (skill)	1	1	1	1	2	1.41	0.67	Control
Interacts with objects (skill)	2	2	2	2	2	1.96	0.30	Control
Gives cues (extent)	1	1	2	1	1	1.51	0.68	Framing
Interacts with objects (intensity)	1	1	1	2	2	1.76	0.46	Control
Gives cues (skill)	1	1	2	1	2	1.68	0.56	Framing
Engaged (intensity)	2	2	2	1	2	1.84	0.55	Motivation
Social play (extent)	2	0	1	0	1	1.83	0.98	Control
Engaged (skill)	1	1	1	1	2	1.77	0.81	Framing
Reads cues (skill)	0	0	1	1	1	1.04	0.66	Framing
Shares (skill)	0	0	1	0	0	1.02	0.71	Control
Enters (skill)	0	0	0	0	0	0.39	0.66	Control
Negotiates (skill)	0	0	0	0	0	0.89	0.80	Control
Social play (intensity)	1	0	1	1	1	1.19	0.52	Control
Persists (intensity)	2	1	1	2	2	1.44	0.77	Motivation
Social play (skill)	0	0	1	0	0	1.11	0.70	Control

Items in order of difficulty according to ToP manual	Amy	Zoe	Josie	Ben	John	Study1 Mean	Study1 SD	Element
Initiates (skill)	0	0	0	0	0	0.83	0.74	Control
Modifies (skill)	0	1	1	1	1	0.91	0.56	Control
Pretends (skill)	0	0	0	0	1	0.75	0.76	Reality
Supports (skill)	0	0	0	0	0	0.54	0.63	Control
Mischief/teasing (skill)	0	0	1	0	0	0.23	0.59	Reality
Affect (intensity)	1	1	1	1	1	1.22	0.44	Motivation
Unconventional (skill)	0	0	0	0	0	0.24	0.55	Reality
Pretends (extent)	0	0	0	0	2	0.97	0.99	Reality
Unconventional (extent)	0	0	0	0	0	0.16	0.43	Reality
Clowns/jokes (extent)	0	0	0	0	0	0.15	0.40	Reality
Mischief/teasing (extent)	0	0	0	0	0	0.1	0.35	Reality
Clowns skill						0.37	0.66	

7.6.1 Individual participants: Playfulness, mind mindedness, and attachment behaviours

7.6.1.1 Amy

Amy's ToP score was -2.52 which was more than 1 standard deviation below the mean for study 1. Amy did not present with any attachment difficulties, with her score for the ADC being close to the mean for study 2. Her maternal mind mindedness score was also very close to the mean for study 2. However, in relation to the ToP, Amy had difficulty with many items relating to internal control. She displayed low scores in *Intensity of interacting with objects* (item 3)[6], the *Skill of sharing ideas or objects* (item 10), the *Skill of negotiating needs* (item 9), the *Skill of playing with others* (item 13), the *Skill of Initiating play with others* (item 8), and the *Skill of modifying activity to maintain challenge or make it more fun* (item 5). She also displayed difficulties with some framing items, including *Skill of giving cues* (item 28) and *skill of responding to cues* (item 30). Along with Zoe, Amy scored more poorly on the *Skill of responding to cues* (item 30) compared with the other three children in the study.

Amy engaged largely in sandpit play for the entire play session, displaying quite repetitive play such as shovelling sand, smoothing the sand with the shovel or patting down the sand. Despite the repetition, Amy was not able to modify it to make it more interesting and/or challenging. She looked frequently at the researcher throughout the play segment, and this became more frequent after she had been in the sandpit for more than 10 minutes. The independent rater queried whether Amy felt that she was supposed to remain in the sandpit, especially as she did look out towards the other children playing in the playground. Amy had been given the same instructions as the other children in all three studies. One possible explanation for her constant scrutiny of the researcher and the camera may have been that she was watchful and hypervigilant which could present itself as an inability to focus on a friendly or benign situation (Dodge et al., 1995). Amy's hesitancy may have been motivated by a desire to do the right thing and/or the outcome of a lack of secure-readiness-to-learn as described by Aber and Allen (1987).

[6] The item numbers from the ToP referred to in this chapter are taken from Table 5.9 in Chapter 5.

Amy's behaviours were consistent with the engagement in repetitive play and difficulty in organising play that has previously been observed in children who have experienced abuse (Caughey, 1991; R. Cooper & Sutton, 1999). Amy also had two children who came in close proximity to her in the sandpit at different times. She initially continued her repetitive play, showing little ability to respond to their cues. Amy did engage in a brief interaction with one child in which she shovelled sand into his truck. She also shared too readily (i.e. allowed children to take her play materials) and had difficulty in negotiating to have her needs met (i.e. allowed a child to flick sand on her without protesting) or in giving appropriate cues (e.g. rather than telling or signalling that she wanted the child to stop flicking sand, she wiped it off her lap). Consequently, Amy predominantly had difficulty with aspects of internal control and framing.

7.6.1.2 Zoe

Zoe's score on the ToP was -2.60, which was also greater than 1 standard deviation below the mean for study 1. Zoe's score for the ADC was also close to the mean for study 1. However, Zoe's score for maternal mind mindedness was below 1 SD from the mean for study 2. In the Top, Zoe had difficulties with many items of internal control, including the *Intensity of interacting with objects* (item 3), the *Extent of social play* (item 14), the *Skill of sharing ideas or objects* (item 10), the *Skill of negotiating needs* (item 9), the *Intensity of playing with others* (item 12), the *Skill of playing with others* (item 13) and the *Skill of initiating play with others* (item 8). Further, Zoe had difficulties with aspects of framing, including the *Skill of giving cues* (item 28) and the *Skill of responding to cues* (item 30). Zoe's ability to read cues was lower than three other children in the study.

Zoe also engaged in sandplay, and spent much of the play segment engaged in watchful behaviour. She looked both at the researcher frequently, but also looked around her in various directions frequently. Zoe seemed to focus more on the researcher and the camera rather than other children. For example, when she removed a bucket which she had just upturned to reveal a sandcastle, she looked at the researcher with a very slight smile as if to seek a positive reaction. She proceeded to then decorate her sandcastle with flowers, continuing to look at the researcher. While making a sand castle is engaging in pretend play, the scoring for pretend play on the ToP is specific. For example, the *Extent of pretending* refers to the overall proportion of the play observation in which the child engages in pretend

play – children can exhibit some pretend play and still score a zero if it was for a brief period of the whole observation. The *Skill of pretending* is scored according to whether the child uses objects or people in expected ways in play, and needs to convince the rater that he or she is taking on a different character or action or using an object differently. The rater obviously considered that the child's ratings were zero in this instance. Zoe was surrounded constantly by other children, but continued to play exclusively on her own. Much of her play was in the sandpit, but during the last five minutes of the session, she switched suddenly between activities, playing with some weighing scales on a table, then the slides and large equipment and then back to the scales, all in a short period of time. All of her transitions at this time were very sudden and frequent, and she was not able to transition smoothly between activities. This is consistent with the difficulties observed in children who have experienced abuse in engaging in less play and more transitional behaviour (Alessandri, 1991; Darwish et al., 2001).

7.6.1.3 Josie

Josie's ToP score of -1.33, while lower than the mean ToP score for Study 1, was still within 1 SD of the mean for study 1. Josie displayed fewer difficulties in relation to the other four children in the study. It is of note that, of all the children, that she has been in out-of-home care (kinship care) since she was 10 months old, and this is the longest period of time of all the children. Josie's score for the ADC was close to the mean for study 1, so was not of concern. In her play, Josie showed some difficulty with three internal control items, including the *Intensity of interacting with objects* (item 3), the *Skill of negotiating needs* (item 9) and the *Skill of initiating play with others* (item 8). Josie received higher scores than the other four children in: the *Extent of giving cues* (item 28), the *Skill of sharing ideas or objects* (item 10) the *Skill of playing with others* (item 13), and the *Skill of using mischief/teasing* (item 18). She and John both performed better than the other three children on the *Skill of giving cues* (item 29). This is despite Josie being the youngest of the five children.

Josie engaged largely in solitary play in the company of others, firstly choosing to do a painting on her own. On completion of her painting, she smiled whilst showing her painted hands to the camera. She transitioned to playing with blocks on a table, and appropriately protested when a peer came and placed a block on her tower – she then flicked it off. When

he asked why she did that, her reply was 'Cos it's my tower'. After the boy remained nearby, she did engage with him in some brief play and they knocked down the tower together. Josie displayed a greater level of control in her play than the other children, showing an ability to share and play socially with others. She was also able to give clear cues when she was not happy with the interaction.

7.6.1.4 Ben

Ben's ToP score of -2.52 was more than 1 standard deviation below the mean for study 1. Ben's scores for both the ADC and mind mindedness of his carer were both very similar to the means for study 2. In relation to playfulness, Ben demonstrated difficulty with two items from intrinsic motivation, including the *Extent of being engaged* (item 23) and the *Intensity of being engaged* (item 24). He demonstrated difficulty with one aspect of framing – the *Skill of giving cues* (item 29). Items of internal control that were difficult for Ben included the *Extent of social play* (item 14), the *Skill of sharing ideas or objects* (item 10), the *Skill of negotiating needs* (items 9), the *Skill of playing with others* (item 13) and the *Skill of initiating play with others* (item 8).

Ben engaged in a number of play activities through the session, including jumping on a small trampoline, completing puzzles at an outside table, and playing in the sandpit. His transitions between activities were either sudden or involved wandering around looking for what he would do next. Ben appeared to enjoy adult attention, starting on the trampoline, looking at the camera. After transitioning to the puzzle table, he received a great deal of adult support and positive reinforcement for puzzle completion. During the sandpit play, he was initially distracted, watching other children argue, pouring sand onto a mound for a while, and then finally burying a twig in the sand. He seemed pleased that he could show the researcher that the twig was gone (buried). He had difficulty with control items, displaying little social play or initiating of play with peers, seeming to prefer adult attention.

7.6.1.5 John

John's ToP score of -1.70 was lower than the mean ToP score for study 1, but was still within 1 SD of the mean for study 1. John's ADC score of 26 was nearly 2 SDs above the mean for study 1, and this was considered to be in the clinical range as outlined by Osborne and

Delfabbro (2006), indicating that his attachment behaviours were of concern. Further, his carer's mind mindedness score was one SD below the mean for study 2. In relation to playfulness, John showed difficulty with just one aspect of intrinsic motivation, the *Extent of being engaged* (item 23). He also demonstrated difficulty with some internal control items, and these included the *Skill of sharing ideas or objects* (item 10), the *Skill of negotiating needs* (item 9), the *Skill of playing with others* (item 13) and the *Skill of initiating play with others* (item 8). John showed higher scores than all of the other four children in the *Skill of transitioning between activities* (item 6), the *Extent of pretending* (item 21), the *Skill of pretending* (item 15) and the *Skill of being engaged* (item 31). Along with Josie, he was also better at the *Skill of giving cues* (item 29) than the three other children. His performance in these areas may relate to being in stable out-of-home care for one year. However, it is of note that he was very supported in his play session by both adults and peers, which may have artificially elevated his scores. In the scoring of the ToP, items such as the *Extent of pretending* do not differentiate between whether pretend play was self-initiated or not, however, the rater did comment on the amount of adult support for pretend play.

John, like many of the other children, had difficulty with control items such as social play, sharing and initiating. While he was able to engage in pretend play, he received quite constant support throughout the play segment from a teacher. He was not, however, able to extend the sequence of pretence beyond setting up for a picnic by gathering plastic plates, teapots, and chairs – it was also of note that he continued to gather these until all the boxes of plates were empty, despite only having two other children playing in the scenario.

At the end of the play session John went into to the bathroom and began using the automatic dispenser of hand washing foam. A teacher instructed him not to use too much, but he continued to use copious amounts and then watched both teachers and researcher for a reaction. John's behaviour then became quite difficult to manage. This testing behaviour is consistent with research findings that neglected children have difficulty with compliance, tend to have negative representations of themselves, display negative affect, and have difficulty with emotion regulation (Hildyard & Wolfe, 2002). John's difficulty with compliance may also explain why preschool staff support his play so much, that is, the extra support in play helps to address previous neglectful experiences, but also ensure that John's behaviour is easier to manage in the preschool context.

7.6.2 Summary of children's playfulness profiles

It is of note that all children tended to get lower scores on the harder ToP items, for example, all children received scores of zero for 6 of the hardest 11 items. Item scores for which there were few noticeable trends related to intrinsic motivation (e.g. persistence and affect in play), internal control of self (e.g. feeling safe, deciding what to do, transitioning to other activities, and interacting with objects), and suspension of reality (e.g. pretend play and unconventional use of objects).

Josie had the highest playfulness score of -1.33, which although is lower than the mean playfulness score for study 1, would still appear to be within a normative range for this study. Further, it is interesting that she has been in care the longest, since she was 10 months of age (just over 3 years in care), but she was also the youngest (48 months). John also had a higher playfulness score (-1.70) when compared to the remaining three children in the study, but it is of note that his play was greatly supported by staff and peers during the assessment, despite instructions to staff that the session should be a free play session, with intervention only as required for limits on inappropriate behaviour. This may potentially relate to the caregiver's reported satisfaction with the support they have received from the preschool since the child has been in her care, with the staff perhaps finding it difficult to pull back from their supportive role with this child for the purposes of the assessment. John's score may be higher than some of the others because he has been in care for 12 months. However, his score may have also been artificially elevated by the supportive environment which particularly seemed to nurture his pretend play skills, as the ToP rater noted that his pretend play was facilitated by the teacher and peers.

7.6.3 Internal control

While the children in this study seemed to have difficulty with items included under the element of shared internal control such as the extent of social play, the skill of sharing, the skill of negotiating and the skill of initiating, this cannot be generalised to all children who have experienced child abuse and/or neglect. However, the considerable difficulty with shared internal control does seem to be a very strong trend in this study. This would seem to be consistent with the literature that children who have experienced abuse and/or neglect may display limited prosocial behaviour, and increased withdrawn and/or

disruptive/aggressive behaviour (Alink et al., 2012). It would also seem to be consistent with Cooper's (2000a) finding that children who had experienced child abuse and/or neglect displayed less spontaneous verbal interaction with adults and engaged in less adult-child cooperative behaviour than the children in the non-abuse group. The results in this study also tend to support Alessandri's (1991) findings which suggest that children who had experienced child abuse and/or neglect might have difficulties with items on the shared control element of the ToP, including sharing, negotiating, supporting the play of others, and entering the play of others, as well as difficulties with transitions between activities. While all of these items were not markedly below the mean scores for study 1, it is interesting that all of the items that were difficult for these participants all related to the shared aspect of control.

These difficulties in prosocial behaviour may relate to a negative attribution bias (i.e. attributing hostile intent to an individual approaching them, even if in a benign way) and the child may be less accurately able to process social cues, resulting in more aggressive responses to problematic social situations (Cicchetti & Valentino, 2006; Dodge et al., 1997). Effective emotional self-regulation requires the child to be able to have control over attending to threatening cues (Pollak, 2008). Therefore, it might then follow that successful self-regulation is necessary in order to focus on relevant and benign stimuli which may facilitate both true play and learning. On the basis of the observations in this study as well as discussions in the literature (Pollak, 2008), self-regulation is a potential area of concern for children who have experienced child abuse and neglect.

The aspects of control that were difficult for children in this study seem to be related to the documented effects of abuse such as less initiating of play, and greater dependency on others in play (Valentino et al., 2006). Extent of social play is quite low and there was a wide range of abilities of the children in terms of being able to enter play in a group of children. Hypervigilance may have a large impact on the ability to initiate play and/or be less dependent on others in play. A child constantly scanning the environment may miss relevant cues and this might impact on their social play, their ability to make decisions in their play, feelings of safety in play and their consequent ability to transition readily between activities. The tendency of children who have experienced abuse and neglect to attribute hostile intent towards others may have a significant impact on the ability to and desire to engage with other children, enter and initiate.

7.6.4 Framing

Given that children who have experienced abuse and/or neglect have been found to display a selective attention bias for signs of threat (Lee & Hoaken, 2007) and their documented difficulties in being able to accurately read facial expressions in others, it is somewhat surprising that the framing items (i.e. giving and reading cues) were not more problematic for the children in this study. Josie and John both scored a 2 for the skill of giving cues, so possibly a greater length of time in out-of-home care with relatives may have improved their ability to effectively give cues. Both girls who lived with their natural mothers (and had been subjected to emotional abuse and witnessing violence) displayed difficulties in being able to skillfully read cues. Further, the rater commented on Amy's form that she wondered whether Amy felt that she needed to remain in the sandpit for the duration of the play video, mainly because she looked regularly at the researcher and seemed hesitant about what to do. However, all children received the same instructions prior to the video being recorded. It seems possible that the hesitancy that the rater observed may in fact have been some hypervigilance, as well as a desire to overly comply in order to please others. It is also likely that if children are watchful, fearful and distractible, as suggested by Lee and Hoaken (2007), it would be very difficult for them to attend to relevant social cues in the environment.

While there were few difficulties observed in framing for children in this study, the very small sample needs to be acknowledged as well as the lack of opportunity to differentiate between types of abuse. The definitional problems highlighted earlier by Higgins (2004) demonstrate the difficulties in analysing the impact of maltreatment when there are overlapping forms of abuse.

7.6.5 Freedom to suspend reality

While the children in this study did not seem to differ in relation to the freedom to suspend reality items compared children in study 1, it should be noted that most of these items are on the difficult end of the spectrum, and such discrepancies may become more apparent with slightly older children, as typically developing 5- and 6-year-olds might be expected to be able to manage the more difficult items. It should also be noted that many of the items contained in the *Freedom to suspend the constraints of reality* element of the ToP as

conceptualised by Bundy (2004) include the broader aspects of pretend play (e.g. object substitution), as described by Dore et al. (2015). Given that children who have experienced child abuse and/or neglect have been found to have difficulties in imitative, symbolic and imaginative play skills (Alessandri, 1991; Cooper, 2000a), more difficulties in this area would have been expected. Despite freedom to suspend reality not presenting as a major problem for the children in this study, they did seem to have few skills in either pretend play or the use of objects in unconventional ways (predominantly scores of zero). In the larger study, there was a substantial number of children who engaged in pretend play to some extent and also showed a degree of skill. Further, John's performance in pretend play may have been overinflated because of the teacher and peer support provided.

7.6.6 Intrinsic motivation

From the earlier discussion on the effects of child abuse and/or neglect, it might be expected that hypervigilance and a lack of secure readiness to learn would impact on participants' intrinsic motivation, reflecting in their scores in the areas of engagement, persistence with activities, and affect. However, it may be that, because the children in this study are in safe places now and/or find the preschool environment to be a safe place, there was little difference between these children and those in study 1. In other words, these children were feeling safe enough to engage in and enjoy play and become involved in the process rather than just the outcome. It may be that scores were not overly affected in intrinsic motivation because of the impact of selection bias. For example, the caregivers recruited through study 1 who volunteered their involvement in study 3 may have been protective caregivers in their families, thus playing a supportive role in their children's lives.

7.7 Summary and conclusion

While these results provide interesting observations to consider, as discussed they cannot be generalised because of the small sample size, the lack of differentiation between types of abuse, and the need to empirically validate the findings. The analysis of the play profiles in this study, however, seems to confirm Burghardt's (2005) criteria that individuals must feel safe before play can occur, as the repercussions of past feelings of lack of safety may be impacting on current playfulness for these children. It is of note that the children's scores on

the Attachment Disorder Checklist (ADC) and on their parental mind mindedness did not reveal any striking trends. Only one of the children had a score on the ADC that was in the clinical range (26), but he seemed to be more playful than 3 of the children in the study. Therefore, it may be that a history of an insecure attachment relationship can also be addressed by living in a safe, secure environment. Two children had caregivers with low mind mindedness scores, but this did not seem related to their playfulness. Therefore, further exploration of potential relationships between children's playfulness, attachment disorder and parental mind mindedness is needed in the maltreatment area.

As discussed in Chapter 2, playfulness has been linked with divergent thinking (Barnett & Kleiber, 1982), creativity (Lieberman, 1977; Van der Poel et al., 1991) and coping ability (Hess & Bundy, 2003; Saunders et al., 1999). Therefore, ongoing exploration of playfulness is essential in relation to children who have experienced child abuse and/or neglect, especially given the potential relevance of coping skills for resilience.The analysis of the play profiles of the children in this study highlights that playfulness is a clinically useful way of conceptualising the socioemotional difficulties of vulnerable children, as many of the items on the ToP appear within the literature relating to the socioemotional impact of child abuse and/or neglect. Consequently, it would be useful for early childhood teachers to refer at risk children to occupational therapy for playfulness assessments in order to specifically identify particular areas of socioemotional difficulty. This would enable implementation of appropriate interventions that are emerging within the playfulness literature (e.g. Cordier et al., 2009; Wilkes, Cordier, Bundy, Docking, & Munro, 2011; Wilkes-Gillan, Bundy, Cordier, & Lincoln, 2014). It is also of note from study 1 that playfulness was positively correlated with teachers' ratings of children's competence in socioemotional skills, fine motor skills and approach to learning. As such, the simple developmental checklist (AIFS, 2006) used in study 1 might be a useful screening instrument to assist in identifying children in need of playfulness interventions.

There are many potential interventions that are worth considering in order to promote playfulness in children who have experienced child abuse and/or neglect, which in turn might facilitate adaptive responses in these children. For example, modeling and play tutoring approaches (Meins et al., 1998; Russ, 2003) may assist a child to develop skills in giving and receiving cues from peers and adults. Modeling, supporting and scaffolding play opportunities may also reduce dependency in play and assist these children with social play,

as well as initiating and negotiating in play. Finally, dyad based interventions that have emerged from attachment theory such as Watch Wait and Wonder (N. J. Cohen et al., 1999) and the Circle of Security (Hoffman, Marvin, Cooper, & Powell, 2006; Marvin, Cooper, Hoffman, & Powell, 2002) could both potentially assist children to develop playfulness, as the focus of these interventions is on following the child's lead and responding to a child's cues. Therefore they are likely to assist with decreasing dependency in play and increasing the child's ability to initiate interactions and feel a sense of control. Using the dyad approach for both parent and child also assists with supporting families to provide safe environments for their children. Potential interventions will be explored in more detail in Chapter 8.

It seems that assessment of playfulness may be a valuable way of identifying the social and emotional difficulties of vulnerable children, particularly in relation to internal control of play, and to some extent, framing. Examining playfulness profiles of traumatised children may also help to provide direction for future therapeutic intervention. While there are few noticeable trends in this study related to motivation and suspension of reality, further investigation with a larger sample of children is warranted. This would provide opportunity to explore potential relationships between these elements of playfulness and the difficulties that vulnerable children experience with less enjoyment and creativity in play. The parallels between the elements of playfulness and the documented impacts of abuse provide exciting potential for playfulness to play a key role in strengthening protective factors within vulnerable children.

An important implication of this study is also the apparent difference in performance of children in some of the items when they had been in longer periods of stable out-of-home care. This warrants further study using a larger sample with a range of children who have been in out-of-care for differing periods of time. A larger study with this population of children is recommended, and consideration should be given to the suggestions by Higgins (2004) in relation to clear definitions of abuse and/or neglect, whilst making allowances for differences in severity and/or duration, as well as overlapping types of maltreatment.

Examination of Table 7.1 in the context of the children's playfulness profiles in this study suggests that some of the expected influences of maltreatment were observed (e.g. aspects of shared control such as sharing, negotiating, initiating and supporting the play of others),

but not others (e.g. giving and receiving cues and pretend play were not persistent difficulties for all children). It is worth considering whether the area of shared control that seems to be most affected represents aspects that might be persistently affected (i.e. beyond the duration of abuse and/or neglect). It may then be that freedom to suspend reality, framing, and intrinsic motivation (which were not universally difficult for these children) may be ameliorated by the safe and secure environments in which the children were currently placed. Alternatively, the areas which were not as problematic may also be influenced by the child's developmental trajectory where differential performance might not be seen until the child was older.

The presence of trends in the playfulness profiles of the children in this study suggests that ongoing research is needed. Future research could include a quantitative study comparing playfulness in children who have experienced child abuse and neglect with those who have not. Further research directions are explored in Chapter 8. It is also interesting that the children who had been in out-of-home care for longer periods seemed to be more playful. Consequently, it suggests that safe, stable early placements may enhance the development of playfulness in conjunction with a supportive preschool environment. Thus, this would seem to provide some support for the *Integrated model of playfulness*, particularly that a safe and secure early environment may lay the foundation for the development of playfulness. However, this suggestion regarding the model needs to be tested empirically.

CHAPTER 8 – CONCLUSION

This chapter will provide an overview of the findings of all three studies, and relevant future research directions. Relationships or potential relationships within the *Integrated model of playfulness* as presented in Figure 6.1 will also be discussed. The strengths and limitations of each of the studies have been addressed both in chapters 6 and 7. The final focus of this thesis will then be on the implications for therapeutic practice and potential playfulness interventions.

The aims of studies 1 and 2 were to examine playfulness in South Australian preschool children, and to determine whether there was a relationship between playfulness and a range of child and family characteristics as well as aspects of the family caregiving environment such as attachment behaviour, parental mind mindedness, parenting practices and parent playfulness. Study 3 aimed to qualitatively explore playfulness, mind mindedness, and the attachment behaviour of a small group of children who have experienced child abuse and neglect.

8.1 Summary of findings

The mean score for playfulness in preschool children in study 1 was found to be comparable with a sample of preschool children from the United States of America (Saunders et al., 1999), suggesting that levels of playfulness might be similar in western societies. Relationships that had been found in previous studies (e.g. Barnett & Kleiber, 1984) between children's playfulness and family characteristics such as children's age, children's gender, parent's age, and socioeconomic status were largely unsupported, with the exception of socioeconomic status (i.e. a positive relationship between increasing SEIFA scores and increasing levels of children's playfulness). In relation to maternal age, the current study found that more playful children had older mothers, in contrast to previous studies in which higher levels of children's playfulness were associated with younger maternal age (Barnett & Kleiber, 1984). There was also no relationship found in this study between children's playfulness and either age of child or gender, as found in previous studies (Lieberman, 1965; Zachopoulou et al., 2004). The relationships found between children's playfulness and teacher's estimation of children's socioemotional development and approach to learning

seem to support previous relationships found with divergent thinking (Barnett & Kleiber, 1982).

Very few relationships within the model examined in study 2 were supported. There were two small relationships between two potential predictors and children's playfulness: both the score on the Attachment Disorder Checklist (ADC) as well as parental mind mindedness were related to children's playfulness scores. While these were both quite small relationships found in this study, they are still of interest because they are consistent with the attachment theory literature in which both a secure attachment relationship and parental mind mindedness have been associated with outcomes such as symbolic play, play skills and solo pretend play (Belsky et al., 1984; Meins et al., 1998; Slade, 1987).

There were no relationships found between child playfulness and any of the dimensions of parenting practice, nor with adult playfulness. This was surprising, as while there have been few studies of parenting and child playfulness, there is some evidence in the literature to suggest a relationship (Clawson & Robila, 2001; Van der Poel et al., 1991). While there were no direct relationships between any of the parenting dimensions and child playfulness, perhaps children's playfulness is related to other parental factors such as flexibility and abstract thinking, as suggested by Bishop and Chace (1971), as parents with these qualities are more likely to provide more playful environments for their children.

Potentially there are factors other than parenting practices which promote children's playfulness, including parental attitudes, and an environment that facilitates new experiences and the autonomy of the child. This could also explain the small relationship found between parental mind mindedness and a child's playfulness, as a parent's ability to view their child as a separate individual with their own mental state is presumably closely linked with flexibility and valuing of the child's autonomy. It may also be that adult playfulness is not a prerequisite condition needed to nurture child playfulness. That is, parental playfulness may not be necessary for fostering the attuned play in infancy that Gordon (2014) suggests arises from a secure attachment relationship and is a necessary step towards exploratory play in the second year of life. In fact, security of attachment and parental mind mindedness may be better predictors of children's playfulness.

The third study in this thesis examined playfulness in children who have experienced child abuse and/or neglect. Although this study examined only a very small sample of five

children, the trends were quite strong in terms of the children displaying difficulties with many of the internal control items, particularly those that involved shared control of play. The difficulties with shared control were indicated by a number of the children in study 3 performing at least one standard deviation below the mean raw score for many of these items in the study 1 normative sample. The areas of playfulness that caused difficulty for the children in this study included the skill and extent of social play in which they engaged, and skills such as sharing, negotiating and initiating play. The difficulties these children experienced in sharing, negotiating, initiating and playing with others are all consistent areas of difficulty within the literature on child abuse and/or neglect, including problems with social skills, cooperative skills, verbal interaction and prosocial behaviours (Alessandri, 1991; Alink et al., 2012; Cooper, 2000a).

As such, these studies have shown some very small yet encouraging relationships or trends within the *Integrated model of playfulness* as shown in Figure 6.1, particularly when coupled with supported relationships within the literature. Consequently, the proposed model warrants further investigation in future studies of larger samples of children.

8.2 Future research directions

The issues around measurement of children's playfulness in terms of stability of the environment in relation to numbers of playmates and structure of the preschool environment indicate that further research in this area is warranted. A replication of study 2 examining proposed relationships in the *Integrated model of playfulness* is recommended. While playfulness is considered an attitude or disposition, the literature explored in this thesis (particularly in Chapter 3) has demonstrated the importance of the environment in promoting playfulness (e.g. parents as play partners) and how playfulness can vary between settings, as shown by Rigby and Gaik (2007). Therefore, further research using the ToP across multiple settings (both indoor and outdoor) needs to consider methods to increase the reliability of the setting, and should consider observation of playfulness indoors to enable comparison with other studies. An alternative would be to formally assess the environment (e.g. using the Test of Environmental Supportiveness) so that the environment can be factored into any analysis. Consistency of the setting could be increased in future research by having a standard number of playmates (of the participant child's choosing)

available, provision of written instructions to teachers (in addition to the verbal ones provided in this study), or by videotaping in a standardised laboratory setting.

Further exploration of the relationships in the model, particularly in relation to attachment security and parent mind mindedness is warranted. A study examining the relationship between children's playfulness and a parent's attachment style using the Adult Attachment Interview would provide further clarification or confirmation of this aspect of the model. The Adult Attachment Interview was presented in an unpublished manuscript by George, Kaplan, and Mein in 1985 (as cited in Bernier & Dozier, 2003; van IJzendoorn, 1995). The Adult Attachment Interview is conducted by interview and provides four possible classifications: autonomous, dismissing, preoccupied, or unresolved (Bernier & Dozier, 2003). The Adult Attachment Interview has been found to be a strong predictor of infant attachment (van IJzendoorn, 1995), so if a relationship between children's playfulness and adult attachment style exists, the instrument may be sufficiently sensitive to detect it. The Adult Attachment Interview is also a reliable, valid and relatively logistically easy way of measuring attachment via an interview of approximately one hour (Bernier & Dozier, 2003; van IJzendoorn, 1995).

While there is little evidence from the current study to suggest a relationship between adult playfulness and child playfulness, it is nevertheless recommended that the adult playfulness variable be retained in a future study, as this would either confirm or dismiss a relationship between the two variables. However, it is suggested that a more robust measure of adult playfulness be used, such as the Short Measure of Adult Playfulness (Proyer, 2012c) or the Playfulness Scale for Young Adults (Barnett, 2007), both of which have promising psychometric properties, although the latter only seems to have been used with populations from 18 to 30 years (Barnett, 2011b; Magnuson & Barnett, 2013). Consideration could also be given to developing an instrument to measure playfulness in the context of parenting, as it would be useful to examine parents' responses to the issue of parenting and play. Further, a parent playfulness measure would help to examine the relationship between children's playfulness and that of their parents in the context of the parent-child relationship. As it is important to develop measurement instruments from the perspective of the population for whom the instrument is intended (Lawrence-Lightfoot, 1997), it would be useful to build upon the study by Mitchell et al. (2014a) in developing an instrument specifically related to parent playfulness.

In keeping with suggestions that true play only occurs when an individual feels safe (Burghardt, 2005; Rubin et al., 1983), it is recommended that future studies measuring children's playfulness should still be conducted within naturalistic settings so that children are likely to feel relaxed and familiar with the environment. This is especially important for vulnerable children who have witnessed violence or experienced abuse and/or neglect. The issues around lack of consistency in measuring children's playfulness could be addressed as discussed at the beginning of this section. Further, in order to retain the naturalistic setting while increasing consistency, play sessions could be videotaped outside of the usual preschool session but still within the preschool facility. This would enable videotaping in a context whereby there was permission to videotape all children, and could provide a consistent number of peers.

The observed trends that emerged within study 3 certainly highlight the need for further research into the playfulness profiles of children who have experienced child abuse and/or neglect. Further, there is a need for greater empirical research into the differences in playfulness between children who have experienced child abuse and/or neglect and those who have not. Such studies would also need to take into account the impact of length of stay in out-of-home care.

It should also be acknowledged that the sample for study 3 was extremely small. Analysis of the children's play profiles can really only provide an indication of trends in relation to specific items, rather than findings that are generalizable to the broader population. However, the trends do highlight the need for further research.

8.3 Potential interventions to foster playfulness

The research reviewed in this thesis within both the child and adult playfulness literature confirms that playfulness is indeed a worthy subject of investigation. Playfulness has been associated with divergent thinking, particularly flexibility and originality (Barnett & Kleiber, 1982; Lieberman, 1965), creativity (Lieberman, 1977; Van der Poel et al., 1991) and coping ability (Hess & Bundy, 2003; Saunders et al., 1999). Further, studies have also found associations between playfulness and benefits right into adulthood, such as stress reduction and coping strategies (Barnett, 2011a; Qian & Yarnal, 2011), life satisfaction (Proyer, 2012a), academic achievement (Proyer, 2011), healthy ageing (Yarnal & Qian, 2011), and a subjective

sense of well-being (Proyer, 2011; Proyer, 2012a; Proyer, 2013). While genetic endowment seems to interact with experience to nurture playfulness in the early years of life, experience is also important for "restoring and cultivating playfulness", so then play may be the key to overcoming developmental traumas (Gordon, 2014, p.251).

Play and playfulness are rarely regarded as the outcome focus of therapy largely because play is undervalued in western culture, as it "conflicts with culturally-held beliefs about the best way to use our time" (Bundy, 2005 p.129). Bundy et al. (2001) have attempted to address this oversight by emphasising the need for interventions to specifically address playfulness in children with disabilities because of its link to adaptability. Bundy et al. (2001, p. 288) emphasised the importance of focusing on playfulness because "effective adaptation as an outcome is at the heart of the philosophical base of occupational therapy". Bergen (2009, p. 415), a strong advocate for incorporating playfulness at school, supports this link with adaptability, maintaining that the ability to engage in playful thought and action is vital for progress of the human species, as it nurtures "creative adaptation to change".

There is now quite a deal of evidence to support the idea that individuals can overcome detrimental histories of being parented to attain earned attachment security through therapy and restorative experiences (Pearson, Cohn, Cowan, & Pape Cowan, 1994), and this is known as "earned-security" (Roisman, Padrón, Sroufe, & Egeland, 2002, p. 1204). Gordon (2014) uses this concept of earned security to support her view that opportunities for attuned play in an environment that establishes safety through intimate empathy is an important first step in nurturing playfulness. She emphasised that the environment for play should be a specifically defined space that is set apart from everyday life and free from any long-term consequences. Feeling safe is an essential key to nurturing play and well-being at any age, especially as developmental trauma influences the emotion-based limbic brain. Therefore, therapeutic play approaches need to focus on the limbic brain by facilitating the primary experience of joy. "When we feel safe, we have access to neural circuits that enable us to be social and happy and playful" (Gordon, 2014, p. 254). Further, supportive relationships can also promote playfulness by providing a secure base from which exploration can occur. Gordon also recommends that therapeutic play should engage the nonverbal right brain because Schore (2003) highlighted that insecure attachments result in underdeveloped, damaged or distorted right brain structures. The nonverbal stimulation of

right brain structures may include rhythmic movement, music, changes of voice tone, touch and facial expression.

In discussing psychological interventions for attachment disorders, D.A. Hughes (2003) emphasises the importance of a child feeling safe within therapy and the need for attunement to occur before any other interventions such as cognitive behavioural strategies can be implemented. Hughes suggested that therapists display exaggerated responsiveness through non-verbal communication such as gestures, facial expressions, touch, tone and rhythm of voice, and eye contact. He also discussed the importance of maintaining an emotional tone in therapy that is consistent with that displayed by the adult in a secure attachment relationship, namely sensitivity, responsivity, curiosity, playfulness, acceptance, empathy, and availability (D. A. Hughes, 2003).

It is interesting that children's playfulness has been found to be related to both children's developmental abilities as well as to the level of parental responsiveness (Chiarello et al., 2006). Further, in a small quasi-experimental design of eight toddlers (15 months to 3 years) and their families, a strong relationship was found between caregiver sensitivity and responsiveness and playfulness of the child (Fabrizi, 2014). Very specific interventions that focus on sensitive caregiver behaviour have been found to increase parent sensitivity as well as security of attachment (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003). Therefore, it seems likely that this sensitive, responsive parenting may well be an important environmental factor in nurturing playfulness, and as such should be considered within playfulness interventions.

A play based intervention developed for children aged 5-11 years of age with ADHD was aimed at increasing play and social skills (Wilkes et al., 2011). The intervention was based on utilising the intrinsic motivation of the 14 participants, nurturing the development of empathy, and actively involved both a playmate and parent/s. The therapeutic approach involved self-modelling through observation and reflection on the previous week's play video, with the therapist facilitating a problem-solving discussion, and jointly developing strategies which were summarised in three key points for the child to try in the current week's session. A dependant samples t-test indicated that both children with ADHD (t = 8.1; $d.f.$ = 13; P <0.01) and their typically developing peers (t = 6.9; $d.f.$ = 13; P <0.01) improved significantly in their post-test ToP scores. Their findings also suggested that there were

improvements in ToP items that were consistent with the construct of empathy, such as *Skill of sharing ideas or objects*, *Skill of supporting the play of others*, *Skill of transitioning between activities* and *Skill of responding to cues*. A follow-up study also revealed that these gains in playfulness were maintained 18 months post-intervention (Wilkes-Gillan et al., 2014).

Many of these strategies could be incorporated into interventions aimed at fostering playfulness in preschool children, as modelling and play tutoring approaches (Meins et al., 1998; Russ, 2003) may assist a child in giving and receiving of cues in play. Modelling, supporting and scaffolding play opportunities may also reduce dependency in play and particularly assist vulnerable children with social play, as well as initiating and negotiating in play. It is also important to incorporate child-centred environments that follow the child's lead (Knox, 1996). Two interventions which focus on the child's lead include: Watch Wait and Wonder (N. J. Cohen et al., 1999) and the Circle of Security (Hoffman et al., 2006; Marvin et al., 2002).

Watch Wait and Wonder has been found to be effective with infants and toddlers at facilitating a more secure attachment relationship, as well as improvements in cognitive development and emotion regulation (N. J. Cohen et al., 1999). The approach is child led and ensures that a child has both physical and emotional access to his or her parent; facilitates both a non-intrusive stance on the part of the parent, as well as sensitive responsiveness to the child's signals; and focuses on the role of the therapist as providing a secure base for the dyad (N. J. Cohen et al., 1999; N. J. Cohen, Lojkasek, & Muir, 2006). The Circle of Security intervention has been found to facilitate secure attachments in children with disorganised attachments (Hoffman et al., 2006). It is a group protocol that focuses on facilitating sensitive and responsive parenting, empathy in the parent, as well as the parent's capacity to recognise and understand his or her child's signals (Hoffman et al., 2006; Marvin et al., 2002). Therapists also act as a secure base from which parents can explore their relationship with their children. Watch Wait and Wonder and the Circle of Security interventions assist with supporting families to provide safe environments for their children. The approaches place the therapist in a role of providing security for both parent and child to nurture a more child-led interaction. Such interactions are essential in creating the child-centred environments that provide freedom and choice for the child and are considered so important in nurturing spontaneity, joy and playfulness (Bishop & Chace, 1971; Knox, 1996).

Both of these interventions are potentially useful approaches for not only addressing attachment difficulties, but also in nurturing playfulness. Incorporating observations of playfulness pre- and post-implementation of these programs would further test the theory of a relationship between children's playfulness and attachment, and as such would be a valuable avenue for future research.

Parents from families in which child abuse and/or neglect has occurred often do not find play enjoyable, display negative emotions and have difficulty experiencing pleasure (Baumrind, 1994; Fagot & Kavanagh, 1991). They also tend to discourage independence and display less openness to new experiences (Trickett & Susman, 1988), both of which would seem to be at odds with Bishop and Chace's (1971) suggestions for an environment which promotes playfulness. Parents from abusing families are also more likely to be critical and intrusive, and use fewer reassuring, praising or empathetic comments in their interaction with their children (Lau et al., 2006). A parenting shift to providing an environment which provides novelty and autonomy would be likely to be a challenging, confronting and even frightening change for many of these parents. Consequently, interventions such as Watch Wait and Wonder and the Circle of Security provide a promising place to start in nurturing playfulness, as the therapist provides a safe haven for the caregiver in embarking on this change.

Children who have experienced trauma such as child abuse and/or neglect have specific needs with regards to intervention. Gaskill and Perry (2014) recommend using the Neurosequential Model of Therapeutics (NMT) (Perry, 2006) which is a neurobiological approach that is not a specific technique for intervention, but rather can be incorporated into other interventions such as play therapy. The NMT takes into account the impact of the stress response on children who have experienced trauma, and focuses on the need to help children self-regulate prior to conducting other insight-based or narrative therapies. To help a child with self-regulation, Gaskill and Perry recommend somatosensory activities such as music, dancing, walking and drawing early on in the therapeutic process. Repetitive sensory experiences and patterned movements as well as gentle vocal tones help to provide a soothing sense of safety which helps with regulation. Most importantly, Gaskill and Perry emphasise that there needs to be attunement between therapist and child, and therapy should be fun so that true play can occur. Without fun and relationship, the child's brain may remain in an alarmed state, thus preventing at least moderate self-regulation which is

necessary before other therapy can occur. As with other interventions discussed above, play therapy is much more likely to be effective with parental involvement in the process, for example, parents participating in guided interactions with their children (Bratton, Ray, Rhine, & Jones, 2005; Gaskill & Perry, 2014).

8.4 Final implications

Exploration of the literature in this thesis demonstrates the essential role that a secure attachment relationship has in children's development, and the importance of playfulness for adaptability and coping skills. The findings presented in this thesis suggest a potential relationship between security of attachment and playfulness, with some small relationships between children's playfulness and both attachment behaviour and parental mind mindedness supported in these studies. However, at this stage, most of the support for the *Integrated model of playfulness* derives from the literature, with the model requiring further rigorous testing and replication.

The findings of these studies have implications for future directions in policy, research and practice. In relation to direction for policy, the findings demonstrate the importance of supporting and funding early intervention programs, particularly those which involve parent-child dyads in addressing both attachment and playfulness. Shonkoff (2010) stresses the importance of policy that is both guided by science, but also embraces the exploration of new ideas. Therefore, it is important that this potential association between attachment and playfulness is further explored. Policy makers need to retain an open mind to this relationship between attachment and playfulness, particularly considering the associations between playfulness and coping skills, divergent thinking and creativity (Barnett & Kleiber, 1982; Hess & Bundy, 2003; Lieberman, 1977; Ruckser-Scherb, 2010). This relationship between playfulness and adaptability also highlights the potential role that playfulness plays in the process of resilience. Policy makers therefore need to consider the ramifications that playfulness has for ongoing well-being, managing stress, and ingenuity (Magnuson & Barnett, 2013; Proyer, 2012a).

Further research is needed in order to continue to inform policy. Research that continues to examine the relationships in the *Integrated model of playfulness* using robust measures and that accounts for environmental differences is warranted. Further exploration of the

relationship between children's playfulness and that of their parents is also needed, as is a specific measurement tool for assessing playfulness in parents. The use of such a tool in future research may help to identify whether playfulness in parents is different to playfulness as measured by other adult playfulness instruments.

When contemplating the implications of this thesis for practice, it is important for therapists to understand how playfulness develops over time in order to be able to effectively facilitate improvements in children who experience developmental deficits which may have a variety of causes, including the experience of traumatic events (O'Brien et al., 2000). Further, "the goal of enabling playful interactions requires occupational therapists to look beyond skill development and examine the role of the environment as it supports or inhibits playful interactions" (Hamm, 2006, p.88). The potential associations between playfulness and both a secure attachment and parent mind mindedness demonstrate this important role of the environment.

The essential role of the environment has been acknowledged in interventions such as the playfulness intervention developed by Wilkes et al. (2011) which involves both parents and peers of children in the program. The use of dyad based interventions such as Watch Wait and Wonder and the Circle of Security have a lot of merit as potential interventions in occupational therapy with children and families. Focusing on the parent-child dyad may potentially facilitate playfulness in the child in addition to nurturing secure attachment relationships. This dyad based therapy might also then facilitate effective co-occupation of both parent and child, which would serve to guide the successful engagement in occupation for both (Pierce, 2009). The involvement of parents in engaging playfully with their children may also facilitate increased life satisfaction and sense of well being in their parenting role, both of which are associated with playfulness in the literature (Proyer, 2011; Proyer, 2013). Research needs to incorporate the measurement of playfulness into the evaluation of the effectiveness of such programs, and this would provide further information about the mechanisms by which these interventions may impact on child development and behaviour.

A therapeutic focus on cultivating playfulness may in fact help to re-wire the brain and replenish the joyfulness and spontaneity that is depleted by trauma (Gordon, 2014). In order to effectively do this, it is essential that occupational therapists embrace the notion of child-centred and least restrictive environments, avoiding 'oughtness' that might inhibit

spontaneity, autonomy and exploration (Bishop & Chace, 1971). In keeping with an attachment theory perspective, it is also important for therapists to provide a secure base for caregivers as they seek to change their behaviours in order to create an environment which nurtures playfulness in their children. By providing the needed support for caregivers, therapists can then help to create the child-centred environments that facilitate playfulness, including: relaxed and nurturing adult behaviour that follows the child's lead; is interested in the child's play; is responsive to the child's cues; and encourages curiosity, freedom and choice (Knox, 1996). In working with children, it is clearly necessary for therapists to consider the broader context of the child's environment, because…

"If a community values its children it must cherish their parents" (Bowlby, 1952, p. 84).

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APPENDIX 1: University of South Australia Human Research Ethics Committee Approval

From: Alice Granger
Sent: Wednesday, 9 July 2008 4:51 PM
To: Shelley Wright
Cc: Fiona Arney; Kirsten Dilena; Ada Lester
Subject: Ethics Protocol P034/08 "Playfulness in preschool children: the impact of parental characteristics and child abuse and neglect"
Attachments: Conditions.March 2004.doc

Dear Shelley,

Re: **Ethics Protocol P034/08 "Playfulness in preschool children: the impact of parental characteristics and child abuse and neglect"**

Thank you for providing the amendments and/or additional information requested by the University's Human Research Ethics Committee (Letter dated 30 June 2008).

I am pleased to advise that your protocol has been granted ethics approval and meets the requirements of the *National Statement on Ethical Conduct in Human Research*.

Thank you for also submitting the variations to your original protocol for approval. The Deputy Chairperson of the University's Human Research Ethics Committee has assessed this request and approved the new participant information sheets, videotaping the Test of Playfulness and having the tapes assessed by an independent assessor (as detailed in your email dated 30 June 2008).

Please regard this email as formal notification of approval.

Ethics approval is always made on the basis of a number of conditions detailed in the attachment; it is important that you are familiar with, and abide by, these conditions. It is also essential that you conduct all research according to UniSA guidelines, which can be found at http://www.unisa.edu.au/res/ethics/default.asp

Best wishes for your research.

Kind regards

Alice

Alice Granger
Compliance Officer
Research and Innovation Services
University of South Australia
Mawson Lakes Campus
Tel: 08 8302 3523
email: alice.granger@unisa.edu.au

APPENDIX 2: Approval to conduct research – Department of Education and Children's Services

Government of South Australia
Department of Education and Children's Services

Community and Tertiary Liaison
Education Centre
Level 15/31 Flinders Street
Adelaide 5000
South Australia

Tel: 8226 2154
Fax: 8226 1815

DECS CS/08/0250.6

6 August 2008

Dear Principal/Director/Site Manager

The research project "*1) Playfulness in preschool children: The impact of parent characteristics and child abuse and neglect (PhD)*
2) Playfulness, attachment and preschool children's perceived self-competence and social acceptance (associated honours project)" being conducted by *Ms Shelley Wright* from the University of South Australia has been reviewed centrally and granted approval for access to DECS sites. However, the researcher will still need your agreement to proceed with this research at your site.

Once approval has been given at the local level, it is important to ensure that the researchers fulfil their responsibilities in obtaining informed consent as agreed, that individuals' confidentiality is preserved, and that safety precautions are in place.

Researchers are encouraged to provide feedback to sites used in their research, and you may want to make this one of the conditions for accessing your site. To ensure maximum benefits to DECS, researchers are also asked to supply the department with a copy of their final report, which will be circulated to interested staff and then made available to DECS educators for future reference.

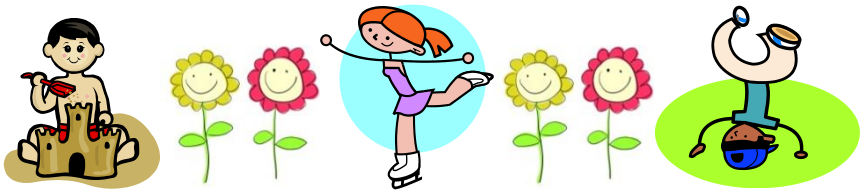
Please contact Elena Basmayor on (08) 8226 2154 for further clarification if required, or to obtain a copy of the final report.

Yours sincerely

Jennifer Stehn
DIRECTOR
COMMUNITY AND TERTIARY LIAISON

Preschool Playfulness Booklet

Some questions for parents



Name of Parent: _____

Name of Child: _____

Date of Interview: _____

Instructions

1. This booklet asks about yourself and your family. Your individual answers will not be shared with anyone.

2. Some questions require you to tick boxes or write a brief answer. Please answer each section of the questionnaire after reading the instructions carefully. It is important that you follow the instructions, otherwise we can't use the information you give us. If you are unsure which answer to choose, please give the best answer you can and make a comment beside the question.

3. Certain questions may look alike, but each one is different. Some questions may not seem relevant for your family, but it is still important for us to know. Please answer each question.

4. The pages in this booklet are double-sided. Please make sure you answer questions on both sides of the paper.

5. There are no right or wrong answers, as your views and opinions are what is important. All of the information you provide will be completely confidential so please be as honest and accurate as possible. None of this information will be used individually in reports written about this study. The information will be used only to examine factors that may impact on playfulness. Some of the information requested involves factors that are already known to influence a child's playfulness.

6. As part of this research project, there will be a second study involving families who have had contact with child protection services such as Families SA (or interstate DOCS, Child Safety etc). For this reason the information gained from Question 14 in the 'About your family' section of the booklet is very important to the outcome of the study, as if you have had involvement with Families SA, it may be more appropriate for you to participate in the second study of this PhD project. It is important that you know that absolutely no judgements will be made about this information and your individual information will not be shared with anyone.

APPENDIX 3: Parenting practices

Parenting

	Never / Almost never	Rarely	Some - times	Often	Always/ Almost always
1. How often do you express affection by hugging, kissing and holding this child?	❒	❒	❒	❒	❒
2. How often do you hug or hold this child for no particular reason?	❒	❒	❒	❒	❒
3. How often do you explain to this child why he/she is being corrected?	❒	❒	❒	❒	❒
4. How often do you tell this child how happy he/she makes you?	❒	❒	❒	❒	❒
5. How often do you talk it over and reason with this child when he/she misbehaves?	❒	❒	❒	❒	❒
6. How often do you have warm, close times together with this child?	❒	❒	❒	❒	❒
7. How often do you enjoy listening to this child and doing things with him/her?	❒	❒	❒	❒	❒
8. How often do you feel close to this child both when he/she is happy and when he/she is upset?	❒	❒	❒	❒	❒
9. How often do you get annoyed with this child for saying or doing something he/she is not supposed to do?	❒	❒	❒	❒	❒
10. Of all the times that you talk to this child about his/her behaviour, how often is this praise?	❒	❒	❒	❒	❒
11. Of all the times that you talk to this child about his/her behaviour, how often is this disapproval?	❒	❒	❒	❒	❒
12. When you give this child an instruction or make a request to do something, how often do you make sure that he/she does it?	❒	❒	❒	❒	❒
13. If you tell this child he/she will get punished if he/she doesn't stop doing something, but he/she keeps doing it, how often will you punish him/her?	❒	❒	❒	❒	❒
14. How often does this child get away with things that you feel should have been punished?	❒	❒	❒	❒	❒
15. How often are you angry when you punish this child?	❒	❒	❒	❒	❒
16. How often do you feel you are having problems managing this child in general?	❒	❒	❒	❒	❒
17. How often is this child able to get out of punishment when he/she really sets his/her mind to it?	❒	❒	❒	❒	❒
18. When you discipline this child, how often does he/she ignore the punishment?	❒	❒	❒	❒	❒

APPENDIX 4: Playfulness Scale for Adults

Play/leisure preferences of adults

For each statement, please tick whether you strongly disagree, somewhat disagree, somewhat agree or strongly agree, or you may also tick any box in between (please answer in relation to yourself).

		Strongly disagree		Some-what disagree		Some-what agree		Strongly agree
1.	I enjoy acting a bit wild and crazy at times	❒	❒	❒	❒	❒	❒	❒
2.	I consider myself to be a serious, no-nonsense type of person.	❒	❒	❒	❒	❒	❒	❒
3.	I find the daily comic strips amusing.	❒	❒	❒	❒	❒	❒	❒
4.	I would like an indoor basketball hoop.	❒	❒	❒	❒	❒	❒	❒
5.	I like my day to be tightly structured so I'll know exactly where I'll be and what I'll be doing.	❒	❒	❒	❒	❒	❒	❒
6.	I get so competitive during card games or sporting events that they become more work than play to me.	❒	❒	❒	❒	❒	❒	❒
7.	I enjoy acting silly or goofy at times.	❒	❒	❒	❒	❒	❒	❒
8.	I would rather go to a museum than an amusement or theme park.	❒	❒	❒	❒	❒	❒	❒
9.	At times I'll sing in the shower or do a little dance at home.	❒	❒	❒	❒	❒	❒	❒
10.	I like to find ways to have fun while at work.	❒	❒	❒	❒	❒	❒	❒
11.	I would rather read a book than play a game.	❒	❒	❒	❒	❒	❒	❒
12.	I find it hard to laugh at myself.	❒	❒	❒	❒	❒	❒	❒
13.	I would rather go to Toys "R" Us than browse the mall.	❒	❒	❒	❒	❒	❒	❒
14.	I think life is more like a comedy than a tragedy.	❒	❒	❒	❒	❒	❒	❒
15.	If I'm feeling blue, laughing tends to make me feel better.	❒	❒	❒	❒	❒	❒	❒
16.	Winning is everything when playing a game.	❒	❒	❒	❒	❒	❒	❒
17.	To me, clowning or playing around is more a waste of time than anything else.	❒	❒	❒	❒	❒	❒	❒

		Strongly disagree		Some-what disagree		Some-what agree		Strongly agree
18.	Even the most serious situation is likely to have a funny side to it.	❒	❒	❒	❒	❒	❒	❒
19.	I like to smile and laugh as much as possible during the day.	❒	❒	❒	❒	❒	❒	❒
20.	I usually don't enjoy jokes or playful teasing.	❒	❒	❒	❒	❒	❒	❒
21.	I'm usually one of the first to initiate fun activities when I'm with my friends.	❒	❒	❒	❒	❒	❒	❒
22.	I would much rather accept a job that is personally enjoyable than one with a wonderful salary.	❒	❒	❒	❒	❒	❒	❒
23.	I would never leave work early to do fun activities.	❒	❒	❒	❒	❒	❒	❒
24.	Wearing a mask / costume on Halloween is fun to me.	❒	❒	❒	❒	❒	❒	❒
25.	I still consider it fun to throw snowballs or build sandcastles.	❒	❒	❒	❒	❒	❒	❒
26.	I enjoy watching Star Trek and other science fiction shows.	❒	❒	❒	❒	❒	❒	❒
27.	I can't find anything amusing about watching a Jim Carrey comedy.	❒	❒	❒	❒	❒	❒	❒
28.	At times, I find it fun to play video or computer games.	❒	❒	❒	❒	❒	❒	❒
29.	I keep a tight rein on my impulses and emotions.	❒	❒	❒	❒	❒	❒	❒
30.	I like to give and receive cartoon or joke books as gifts.	❒	❒	❒	❒	❒	❒	❒
31.	I'm very comfortable playing on the floor with little kids.	❒	❒	❒	❒	❒	❒	❒
32.	My close friends expect light-hearted ribbing from me.	❒	❒	❒	❒	❒	❒	❒
33.	I never make up silly names for people I care about.	❒	❒	❒	❒	❒	❒	❒
34.	People consider me a "fun" person.	❒	❒	❒	❒	❒	❒	❒
35.	I enjoy playing charades.	❒	❒	❒	❒	❒	❒	❒

APPENDIX 5: Demographic questionnaire

About your family

1. What is the sex of the child in this study? Male ❒ Female ❒

2. What is the age of the child in this study (in years and months e.g. 4 years 3 months)?
   _____ years _____ months

3. Does this child have any illness or disability? No ❒ Yes ❒

   If yes, please specify (including any time spent in hospital) _____

   _____

   _____

4. Children are affected differently by different life events. Could you please describe any significant life events for this child and when these events happened (e.g. parent separation, death of a parent or sibling, significant period in hospital, loss of a pet, long stays with relatives, extended serious illness of a parent).

   _____

   _____

5. In which country was this child born? _____

6. Is this child of Aboriginal or Torres Strait Islander origin? _____

7. What are the ages of all other dependent children (18 years or younger) in your home?
   _____ _____ _____ _____ _____

8. Does your child have any other siblings who do not live in your home? If so, what are their ages?
   _____ _____ _____ _____

9. Does this child have any shared parenting arrangements? No ❒ Yes ❒

   If so, do these involve going to another household
   - 1 weekend per week (or equivalent)? ❒
   - 1 weekend per fortnight (or equivalent)? ❒
   - Half time? ❒
   - Other arrangement? ❒

   Details? _____

10. Does this child attend child care?

No ❒
Yes ❒

If yes (or if this child has attended child care in the past), for how many years has this child attended child care?

1 year ❒
2 yrs ❒
3 yrs ❒
4 yrs ❒

Approximately how many hours per week has this child attended child care?

Less than 15 hours ❒
15 – 24 hours ❒
25 – 40 hours ❒
More than 40 hours ❒

11. Which of the following best describes your relationship to the child in this study?

Natural mother ❒ Natural Father ❒
Stepmother ❒ Stepfather ❒

Other (Please describe): _____

12. Which of the following best describes the parents living in the child's household?

Two natural parents ❒
Mother and stepfather/defacto ❒
Father and stepmother/defacto ❒
Mother alone ❒
Father alone ❒

Other (please describe):_____

13. Which language is spoken in the child's household? (e.g. English, Vietnamese, Arabic, Mandarin)

_____

14. Have you received services from an agency in relation to child protection concerns, for example from Families SA (or DOCS, FAYS, Child Safety or equivalent in other states)?

No ❒
Yes ❒

Please note: this information is important because, if you answer 'yes' to this question, it may be more appropriate for you to participate in the second study of the PhD project. This information will not be shared with anyone.

15. In which country was the mother (or parental mother figure) born?

_____

16. If born overseas, how long has the mother (or parental mother figure) lived in Australia?

_____

17. Is the mother (or parental mother figure) of Aboriginal or Torres Straight Islander origin?

_____

18. What is the mother's (or parental mother figure's) age? _____

19. What is the usual occupation of the mother (or parental mother figure) in the child's household? (please write N/A if no mother figure in the household).

_____ (Please describe)

20. Is the <u>mother</u> in the child's household currently in paid employment?

No	❒
Yes, part-time	❒
Yes, fulltime	❒
N/A	❒
Other	❒

Please describe _____

21. What is the mother's (or parental mother figure's) highest completed level of schooling?

Primary school	❒
Some years of high school	❒
Year 12, Matric or equivalent	❒
Technical, trade or TAFE certificate	❒
Tertiary qualifications	❒

22. In which country was the father (or parental father figure) born?

_____

23. If born overseas, how long has the father (or parental father figure) lived in Australia?

_____

24. Is the father (or parental father figure) of Aboriginal or Torres Straight Islander origin?

_____

25. What is the father's (or parental father figure's) age? _____

26. What is the usual occupation of the father (or parental father figure) in the child's household? (please write N/A if no father figure in the household).

_____ (please describe)

27. Is the <u>father</u> in the child's household currently in paid employment?

No	❒
Yes, part-time	❒
Yes, fulltime	❒
N/A	❒
Other	❒

Please describe _____

28. What is the father's (or parental father figure's) highest <u>completed</u> level of schooling?

Primary school	❒
Some years of high school	❒
Year 12, Matric or equivalent	❒
Technical, trade or TAFE certificate	❒
Tertiary qualifications	❒

29. Does your family receive any of the following pensions or benefits?

Pension (e.g. age pension, disability pension)	❒
Family Tax Benefit Part A	❒
Family Tax Benefit Part B	❒
Child Care Benefit	❒
Austudy	❒
Abstudy	❒
Other _____	

29. Is your family's annual income:

Less than $20, 000	❒
$20,000 - $34,000	❒
$35,000 - $49,000	❒
$50,000 - $64,000	❒
$65,000 - $80,000	❒
More than $80,000	❒

Thank you
for your help in completing this booklet

Would you like to receive a summary of the research findings when the study is completed? If so, please provide your address or email address so that a summary of results can be sent to you. This information will be kept separately from the other information you have provided.

Address: _____

_____

_____

OR

Email address: _____

APPENDIX 6: Test of Playfulness (Bundy, 2004) – Scoring sheet

TEST OF PLAYFULNESS (ToP) (Version 4.0 -- 9/04)

Child (#):_____ Age: _____ Rater: _____ In Out Video Live (Circle)	EXTENT 3 = Almost always 2 = Much of the time 1 = Some of the time 0 = Rarely or never NA= Not Applicable	INTENSITY 3 = Highly 2 = Moderately 1 = Mildly 0 = Not NA= Not Applicable	SKILLFULNESS 3 = Highly skilled 2 = Moderately skilled 1 = Slightly skilled 0 = Unskilled NA= Not Applicable

ITEM	EXT	INT	SKILL	COMMENTS
Is actively engaged.				
Decides what to do.				
Feels sufficiently safe to keep playing.				
	XXX			
Tries to overcome barriers or obstacles to persist with an activity.				
Modifies activity to maintain challenge or make it more fun.				
Engages in playful mischief or teasing.				
Engages in activity for the process rather than primarily for the end product.				
Pretends (to be someone else; to do something else; that an object is something else; that something else is happening.				
Incorporates objects or other people into play in unconventional or variable ways.				
Negotiates with others to have needs/desires met.				
Engages in social play.				
Supports play of others.				
Enters a group already engaged in an activity.				
Initiates play that others take up.				
Clowns or jokes.				
Shares (toys, equipment, friends, ideas).	XXX			
Gives readily understandable cues (facial, verbal, body) that say, "This is how you should act toward me."				
Responds to others' cues.	XXX			
Demonstrates positive affect during play.				
Interacts with objects.				
Transitions from one play activity to another.				
OVERALL PLAYFULNESS				

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Occupation & Leisure Sciences
University of Sydney
PO Box 170
Lidcombe NSW 1825
AUSTRALIA



APPENDIX 6 cont: Test of Playfulness (Skard & Bundy, 2008) – definitions of ToP items

Box 4-1 *How ToP Items Associate with the Elements in the Play Model of Playfulness*

Motivation	**Freedom from**	**Control**	Intensity
Engaged	**constraints of reality**	***Self***	Skill
Extent	Mischief	Decides	Supports
Intensity	Teases	Safe	Enters
Process	Pretends	Modifies	Initiates
Persists	Extent	Interacts with objects	Shares
Affect	Skill	Transitions	
	Clowns and jokes		**Frame**
	Extent	***Shared***	Gives cues
	Intensity	Negotiates	Reads cues
	Creative	Social play	Engaged (skill)
		Extent	

Table 4-1
Definitions of ToP Items

Item	*Description*
Is actively engaged.	Extent—Proportion of time player is involved in activities rather than aimless wandering or other nonfocused activity or temper tantrums. Intensity—Degree to which the child is concentrating on the activity or playmates. Skill—Players' ability to stay focused or carry a play theme from activity to activity.
Decides what to do and how to do it.	Extent—Proportion of time when players actively choose what they are doing. Players may decide to do what another is doing, but no one is forcing them or rewarding them for doing the activity.
Maintains level of safety sufficient to play.	Extent—Proportion of time when players feel safe enough to play. If necessary, players may alter the environment.
Tries to overcome barriers or obstacles to persist with an activity.	Intensity—Degree to which the child perseveres in order to overcome obstacles to continuing the activity.
Modifies activity to maintain challenge or make it more fun.	Skill—Ease with which the child actively changes the requirements or complexity of the task in order to vary the challenge or degree of novelty.
Engages in playful mischief or teasing.	Extent—Proportion of time when players are involved in playful teasing or minor infractions of the rules designed to make the play more fun. Skill—The ease, cleverness, or adeptness with which players create and carry out mischief or teasing.
Engages in activity for the sheer pleasure of it (process) rather than primarily for the end product.	Extent—Proportion of time when players seem to want to do the activity simply because they enjoy it rather than to attain a particular outcome or for some extrinsic reward.
Pretends (to be someone else; to do something else; that an object is something else; that something else is happening).	Extent—Proportion of time when there are overt indicators players are assuming different character roles, pretending to be doing something, pretending something is happening, or pretending an object or person is something else. Skill—The degree to which the "performance" convinces the examiner.

Continued

Table 4-1
Definitions of ToP Items—cont'd

Item	*Description*
Incorporates objects or other people into play in unconventional or variable ways.	Extent—Proportion of time when players (1) use objects commonly thought of as toys in ways other than those the manufacturer clearly intended, (2) incorporate objects not classically thought of as toys into the play (e.g., bugs, table legs), or (3) use one toy or object in a number of different ways. Creativity is a key. Skill—The ease or cleverness with which players incorporate objects or other people in creative ways.
Negotiates with others to have needs/desires met.	Skill—Ease and finesse with which players verbally or nonverbally ask for what they need.
Engages in social play.	Extent—Proportion of time during which player interacts with others involved in the same or similar activity. Intensity—The depth of the player's interactions with other people during play. Skill—The level of social play. Ranges from playing alone to being the leader.
Supports play of others.	Skill—Ease with which players support play of others (e.g., encouragement, ideas).
Enters a group already engaged in an activity.	Skill—Ease with which player does something to become part of a group (two or more) already engaged in an activity; the action is not disruptive to what is going on.
Initiates play with others.	Skill—Ease with which player initiates a new activity with another.
Clowns or jokes.	Extent—Proportion of time when players tell jokes or funny stories or engage in exaggerated, swaggering behavior, usually for the purpose of gaining others' attention. Skill—The ease or cleverness with which a player clowns or jokes. Ranges from not gaining others' attention to gaining positive reactions from others to being overtly funny.
Shares (toys, equipment, friends, ideas).	Skill—The ease with which players allow others to use toys, personal belongings, or equipment they are using or share playmates (friends) or ideas.
Gives readily understandable cues (facial, verbal, body) that say, "This is how you should act toward me."	Extent—Proportion of time during which players act in a way to give out clear messages about how others should interact with them.
Responds to others' cues.	Extent—Proportion of time during which the child acts in accord with others' play cues.
Demonstrates positive affect during play.	Intensity—Degree to which player's affect is positive; ranges from mild enjoyment to real exuberance.
Interacts with objects.	Intensity—The degree to which players get involved with objects. Skill—The ease with which players interact with objects.
Transitions from one play activity to another with ease.	Skill—The ease with which players move from activity to activity when one has ended or is not evolving and another is available.

APPENDIX 7: Brief Developmental Checklist

Teacher Questionnaire: Playfulness study

Child's Name: _____

General Information about this Child

1. How many terms has this child attended preschool/ kindergarten? _____

2. How many sessions per week does this child attend preschool/ kindergarten? _____

3. Does this child have any disabilities that you know of? _____

   If yes, please describe _____

   _____

4. Please think about the skills and competencies of this child as described in the following statements. Rate how this child has compared with other children of a similar age, over the past few months.

	More competent than others	As competent as others	Less competent than others	Much less competent than others
a. Social emotional development (e.g. adaptability, co-operation, responsibility, self-control)	❒	❒	❒	❒
b. Approaches to learning (e.g. attention, observation, organisation, problem solving)	❒	❒	❒	❒
c. Gross motor skills (e.g. running, catching and throwing balls, strength and balance)	❒	❒	❒	❒
d. Fine motor skills (e.g. manual dexterity, using writing and drawing tools)	❒	❒	❒	❒
e. Expressive language skills (e.g. using language effectively, ability to communicate ideas)	❒	❒	❒	❒
f. Receptive language skills (e.g. understanding, interpreting and listening)	❒	❒	❒	❒

APPENDIX 8: Attachment Disorder Checklist

This child at Preschool:

Please think about each of the following behaviours and characteristics in relation to this child, and tick the box which most describes the frequency of the observed behaviour.

	Never	Rarely	Sometimes	Often
1. Makes very little eye contact	❒	❒	❒	❒
2. Shows little guilt or remorse for actions.	❒	❒	❒	❒
3. Has been indiscriminately affectionate towards strangers.	❒	❒	❒	❒
4. Deliberately provokes anger in others.	❒	❒	❒	❒
5. Produces theatrical displays of emotions.	❒	❒	❒	❒
6. Has produced incessant nonsense speech.	❒	❒	❒	❒
7. Has been excessively demanding or bossy.	❒	❒	❒	❒
8. Has been able to give and receive affection.	❒	❒	❒	❒
9. Has been willing to seek comfort from others when frightened or hurt.	❒	❒	❒	❒
10. Is able to trust others.	❒	❒	❒	❒

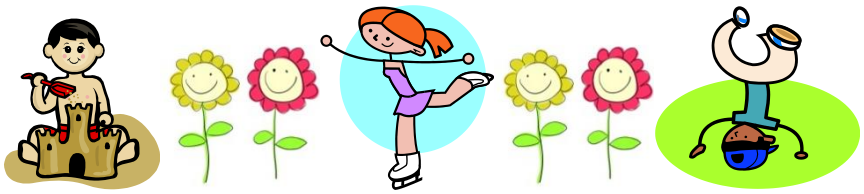
APPENDIX 9: Information for Kindergarten Directors/Teachers (Study 1/2)

INFORMATION SHEET FOR KINDERGARTEN DIRECTORS / PRESCHOOL PRINCIPALS / TEACHERS

Project Title: **Playfulness in Preschool Children**

Researcher: Shelley Wright (Master of Philosophy, Occupational Therapy)
PhD candidate, Division of Health Sciences (OT)
Ph: (08) 8302 2693

Organisation: University of South Australia



This research project aims to find out some of the factors that may impact on preschool children's playfulness. Playfulness is a child's approach to play or their style of play, and includes aspects such as how much they are absorbed in their play, their level of enthusiasm in their play, how much they like to direct their own play, and whether they joke or 'clown' around. Playfulness is an important characteristic because children who are playful are more likely to develop better coping skills and flexible thinking.

I am asking whether you could help to recruit children and families for the project which has been approved by the University of South Australia's Human Research Ethics Committee and also has been approved by the Department of Education and Children's Services. Please find the approvals attached. If you agree to assist, perhaps you could include a brief synopsis of the project (which I will provide) in the preschool newsletter. I would also appreciate it if you could place a copy of the Parent Information Sheet and a consent form in each family's pigeon hole.

The project will involve 4-year-old children who attend preschool or kindergarten and who do not have a disability or significant developmental delay as research has found that playfulness is affected by disability, and this study is aiming to look at new areas. It is also best if the families involved speak English so that they can understand the information sheet.

The project involves parents filling out a questionnaire and coming to a brief interview (5 – 15 minutes), assessment of the child's playfulness at preschool (30 minutes of videotaped observation: 15 minutes indoor play, 15 minutes outdoor), and asking the preschool teacher most familiar with the child to fill out a brief questionnaire regarding the child's development and how they relate to others. Playfulness is assessed using the Test of Playfulness, and the researcher has had formal training in the assessment at the University of Sydney.

With parental consent, some families will be selected to take part in an additional study being conducted by Jessica Ciccarello, an occupational therapy honours student who is being

supervised by Shelley Wright, the researcher. Jessica is also interested in playfulness and is looking at two aspects of self-concept: perceived competence and social acceptance. The way a child views themselves is such an important part of child development, so Jessica's study will provide valuable information regarding how this relates to playfulness.

Jessica's study will involve conducting one additional 15 - 20 minute assessment with each child involved using the Pictorial Scale of Perceived Competence and Social Acceptance (which involves talking about pictures of children who the child feels may or may not be like them e.g. good at running). Jessica's study will also involve accessing additional information, with parental consent, from Shelley's study. This information includes some background information, the Test of Playfulness Scores, and the information provided by yourself as the child's teacher (developmental information, including how the child relates to others).

The PhD project includes a third study which involves families who are NOT being recruited through preschools of kindergartens – it involves families who have had involvement with child protection services such as Families SA. That is why one of my questions to families asks about involvement with child protection services.

All records containing personal information about each child and family will remain confidential and no information which could lead to their identification will be released. Involvement from families is completely voluntary, and it is very important that the decision to participate is completely theirs. Should you agree to help with recruitment, you may contact the following people if you have any queries or concerns: the researcher, Shelley Wright on (08) 8302 2693; or Shelley's supervisor, Dr Fiona Arney on (08) 8302 4172. Jessica Ciccarello may be contacted through her supervisor, Shelley Wright on (08 8302 2693). This project has been approved by the University of South Australia's Human Research Ethics Committee. If you have any ethical concerns about the project or questions about your rights as an informant please contact the Executive Officer of this Committee, Tel: +61 8 8302 3118; Email: vicki.allen@unisa.edu.au. The Project has also been approved by the DECS Research Unit, and the contact person: Elena Basmayor, DECS Research Unit, Phone: 8226 2154.

Please let me know if you would like a copy of the summary of the findings when these become available.



APPENDIX 10: Recruitment information to be included in the Preschool Newsletter and/or as flyers on the wall (Study 1/2)

UniSA

Playfulness in Preschool Children
Your help needed with a Research Project

Shelley Wright, a PhD candidate from the Division of Health Sciences at the University of South Australia, is conducting a study about playfulness in preschool children. The research project aims to find out some of the factors that may impact on preschool children's playfulness. Playfulness is a child's approach to play or their style of play, and includes aspects such as how much they are absorbed in their play, their level of enthusiasm in their play, how much they like to direct their own play, and whether they joke or 'clown' around. Playfulness is an important characteristic because children who are playful are more likely to develop better coping skills and flexible thinking.

Shelley is seeking the involvement of 4-year-old preschool children (and their families) who attend preschool or kindergarten and who do not have a disability or significant developmental delay as research has found that playfulness is affected by disability, and this study is aiming to look at new areas. Please find an information sheet and a consent form in your family's pigeon hole.

Shelley will assess each child's playfulness by videotaping two 15 minute observations at preschool. She has 20 years experience of working with young children as an occupational therapist, and has undertaken training in the Test of Playfulness at the University of Sydney. The project also involves parents completing a brief questionnaires (about 10-15 minutes) and a 5-15 minute interview. With your permission, teachers are also asked to complete a questionnaire containing information about your child's development and the way they relate to others.

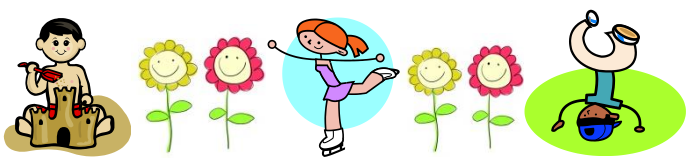
Shelley is also supervising an Occupational Therapy Honours Student, Jessica Ciccarello who is conducting a study looking at playfulness and two aspects of children's self-concept: perceived competence and social acceptance. The way a child views themselves is such an important part of child development, so Jessica's study will provide valuable information regarding how this relates to playfulness.

Jessica's study will involve conducting one additional 15-20 minute assessment with each child which involves talking about pictures of children who the child feels may or may not be like them e.g. good at running). To save collecting information twice, Jessica's study will involve accessing additional information, with parental consent, from Shelley's study.

This project has been approved by the University of South Australia's Human Research Ethics Committee and also has been approved by the Department of Education and Children's Services.

Your involvement is completely voluntary, and a decision not to participate will not have any impact on your child's preschool program at all. All information provided is treated with the strictest confidence. For further information, see the project information sheet or phone Shelley on (08) 8302 2693.

PLEASE RETURN YOUR SIGNED CONSENT FORM TO THE KINDERGARTEN/ PRESCHOOL DIRECTOR IN THE ENVELOPE PROVIDED.

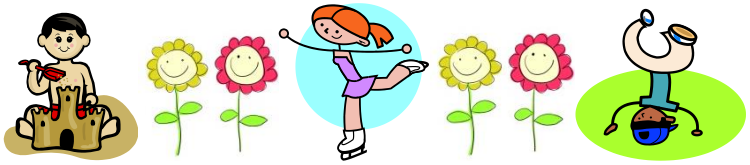


APPENDIX 11: Information for parents – Study 1 & 2

INFORMATION FOR PARENTS

Playfulness in Preschool Children

University of South Australia
Division of Health Sciences



Introducing myself

My name is Shelley Wright (Master of Philosophy, Occupational Therapy) and I am a PhD student at the University of South Australia with many years experience of working with young children. I would like to invite you and your child to participate in my research project. You can contact me on (08) 8302 2693.

About the project

This research project aims to find out some of the factors that may impact on preschool children's playfulness. Playfulness is a child's approach to play or their style of play, and includes aspects such as how much they are absorbed in their play, their level of enthusiasm in their play, how much they like to direct their own play, and whether they joke or 'clown' around. Playfulness is an important characteristic because children who are playful are more likely to develop better coping skills.

I am interested in your involvement if you:

- Are your child's parent/ primary caregiver
- Speak English (otherwise it will be difficult to read the questionnaires)
- Have a 4-year-old child who does not have a disability or significant developmental delay and who attends preschool (research has found that playfulness is affected by disability, and this study is aiming to look at new areas)

The project involves asking you to fill out a questionnaire and coming to a brief interview (5 – 15 minutes), assessment of your child's playfulness at preschool (videotaping 30 minutes of your child's play), and asking your child's preschool teacher to fill out a brief questionnaire.

You are also invited to take part in an additional study being conducted by Jessica Ciccarello, an occupational therapy honours student who is being supervised by Shelley Wright, the researcher. Jessica is also interested in playfulness and is looking at two aspects of self-concept: how a child views their own competence and how they are accepted by others. The way a child views themselves is such an important part of child development, so Jessica's study will provide valuable information regarding how this relates to playfulness.

Jessica's study will involve conducting one additional 15 minute session with your child to assess aspects of your child's self concept (i.e. view of him/her self and how he/she feels accepted by others). Jessica's study will also involve accessing some additional information from Shelley's study with your consent (please see below for the information that is needed).

The project includes a third study which is separate from this one – it involves families who have had involvement with child protection services such as Families SA. This is why one of my questions asks

you about involvement with protective services, that is, it may be more appropriate for you to take part in the third study of t his research project if there has been involvement with Families SA.

What I will be asking you about
The questionnaires and interview for parents will be asking you information about:

- General facts about aspects known to impact on child playfulness such as family make-up (number of siblings, number of people in the household, parent ages etc)
- Parenting questions
- Your own likes and dislikes around playful pastimes
- Your description of your child (interview).

With your permission, the brief interview involving your description of your child will be taped and then I will write notes from the tape – this is the recommended procedure for that interview and helps to give consistent results. The notes I keep will not include any identifying information about you. If you do not consent to audiotaping the interview, I will take detailed notes.

What will the assessment with your child involve?

- Assessing your child's playfulness through two 15 minute observations of your child at preschool – 1 indoor and 1 outdoor observation, and preferably when playing with others. Shelley will videotape these observations and send them on DVD by registered mail to an independent researcher at the University of Sydney. The independent researcher will rate the Test of Playfulness from the DVD to ensure that the study results are not biased, and will not have any identifying information about you or your family.
- Jessica's honours study will involve a 15 minute session with your child using the 'Pictorial Scale of Perceived Competence and Social Acceptance'. It is a tool that has been used by many other researchers to look at how a young child views themselves. It has been designed specifically for young children, and so involves looking at pictures so that it is easy to understand. For each subject (e.g. running) your child will be asked to choose which of two pictures is most like them (the child who is good at running or the child who finds it more difficult).

What will I be asking preschool teachers?
Teachers will be asked to complete a brief questionnaire involving information about:

- Your child's development
- How your child relates to other people.
- Whether your child's play on assessment day is typical for your child (e.g. if your child is unwell or tired on assessment day, it will impact on their playfulness).

What information does Jessica Ciccarello need for her honours study?
In addition to the 15 minute session that Jessica will have with your child, she requires, with your permission, additional information from Shelley's project for her honours study. This information includes:

- the background information about your family (e.g. family make up, number of siblings, number of people in the household)
- the Test of Playfulness result, and
- the information provided by your child's teacher (developmental information and how your child relates to others).

What will happen to the information you give me?
The information that you and your child's teacher give, along with the assessment of your child's playfulness will be combined with information from many other families to write a collective report about the factors that may impact on children's playfulness. Your personal information will not be used individually in any report.

All records containing personal information about you will remain confidential and no information which could lead to your identification will be released. Your information (including the DVD of your child's play) will be given a code number and kept in locked filing cabinets in the researcher's office within the School of Health Sciences at the University of South Australia for 5 years, as required by the University of South Australia.

Your participation

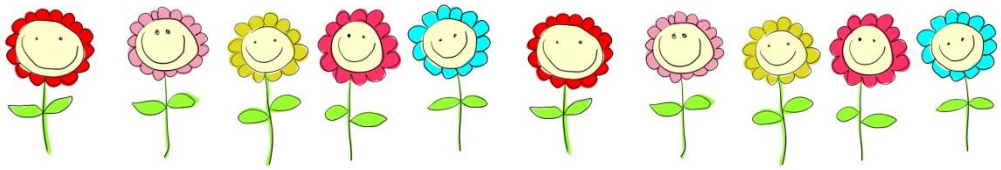
Your help with this project is completely voluntary. If you do not wish to be involved, it will not affect your child's preschool/kindergarten program in any way. You are also free to withdraw from the study at any time without it affecting your status with your child's preschool, now or in the future. We do not foresee any problems arising for you from taking part in the project, but if you do become upset in any way, please contact the researcher, Shelley Wright on (08) 8302 2693 or Shelley's supervisor, Dr Fiona Arney on (08) 8302 4172. Jessica Ciccarello may be contacted through her supervisor, Shelley Wright. There is also a flyer attached containing information about helpful organizations, if you have concerns. Please understand that if I have any concerns regarding abuse and neglect of your children, I must report these concerns to someone in Families SA, as this is mandatory for all researchers.

The research has been approved by both the University of South Australia's Human Research Ethics Committee and the Department of Education and Children's Services. The contact people for each of these are listed below. You may contact them if you have any ethical concerns about the project or questions about your rights as a participant.

- Ms Vicki Allen, Executive Officer, University of South Australia's Human Research Ethics Committee: Ph (08) 8302 3118
- Elena Basmayor, Research Coordinator, DECS Research Unit. Ph 8226 2154

Please let me know if you would like a copy of the summary of the findings when these become available. These will be given out by the Preschool Director or you can provide your address or email address to have a copy sent to you. Your address and any other identifying information will be kept separately from other information you provide.

Thank you for taking the time to read this information.



APPENDIX 12: Consent Form for parents - Study 1 & 2

Consent Form

Project Title: Playfulness in Preschool Children

Researcher's Name: Shelley Wright

Supervisors' Names: Dr Fiona Arney
Associate Professor Jenny Ziviani

Honours' Student Name: Jessica Ciccarello (Supervisor – Shelley Wright)

I agree to take part in this research project which involves myself and my child,

……., as well as information from my child's teacher.

I understand that taking part in the research study is completely voluntary and I can:

- Withdraw my consent by contacting the researcher or the researcher's supervisor without affecting my child's preschool program.
- Stop the interview at any time or decline to answer questions
- Have a support person present during the interview

I also understand that, with my consent, the interview with me about my child will be audiotaped, and the observation of my child's play will be videotaped and burned onto DVD to be rated by an independent researcher at the University of Sydney (who has no access to identifying information). I am aware that the tapes and DVDs will be kept in a locked filing cabinet at the University of South Australia, and that only the researchers on this project will have access to it. I also understand that information about myself and my child will be kept in a locked filing cabinet in the researcher's office in the School of Health Sciences at the University of South Australia for 5 years, as required by the University of South Australia.

I understand that I may be invited along with my child to take part in an additional study being conducted by Jessica Ciccarello as part of her honours studies in occupational therapy at the University of South Australia. I also understand that this involves a 15 minute session with my child, and also involves Jessica accessing specific information from the PhD study.

I agree to take part in the project on the understanding that the researcher will not reveal my name/ my child's name or any information that could identify me or my child in any reports produced as part of the research.

❒ I agree to provide information on my child and to take part in an interview

❒ I agree to the interview being taped

❒ I do not agree to the interview being taped.

❒ I agree to my child being videotaped at the ……kindergarten or preschool

❒ I agree to my child's teacher providing information about my child's development and the way he/ she relates to others

❒ I agree for my child to take part in the study being conducted by Jessica Ciccarello which involves a brief session of looking at pictures to gain an understanding of how your child views his/her self (or should I say the name of the assessment here?)

Please turn over page

❒ I agree to have specific information about myself and my child (i.e. background information, Test of Playfulness, and information provided by my child's teacher) shared with Jessica Ciccarello for the purposes of her honours study.

❒ I wish to receive a summary of the research findings

Name of participant: ……..

Signed: ……. Date: ……..

I have provided information about the research to the research participant and believe that he/she understands what is involved.

Researcher's Signature: …….. Date: ……

Contact Phone Number: _____ (needed for Shelley to contact you about organising a convenient time for the interview).

Preferred Contact Time: _____

APPENDIX 13: Video consent form

(Consent form for videotaping for parents of children not involved in the study)

PERMISSION TO VIDEOTAPE

Shelley Wright is conducting a PhD study through the University of South Australia entitled, 'Playfulness in Preschool Children'.

This PhD study involves videotaping the play of child participants in the study whose parents have given consent for them to participate. While your child is not a participant in the study, it is possible that he/she will appear (with your permission) playing with children who are participants in the video. The videotapes are for the purposes of the research study only and are not for public viewing, and no identifying information will be kept about your child.

PLEASE NOTE: videotaping will only include either children who are participants in the study (with parent permission) or those children whose parents have given consent below.

Please complete the form below:

I _____ **DO / DO NOT** (please circle) give permission for my child,

_____ to be videotaped playing alongside children who are participating in the study. I give this permission on the understanding that my child will not be identified in any way, and that the videos will only be viewed as part of Shelley Wright's research project, 'Playfulness in Preschool Children'. I understand that the videos will be coded by a research officer and then kept in a locked filing cabinet in Shelley Wright's office within the School of Health Sciences for a period of 5 years, as required by the University of South Australia.

_____(please sign)

APPENDIX 14: Confidentiality agreement trained rater

CONFIDENTIALITY STATEMENT FOR RESEARCHERS (ADDITIONAL RATERS) INVOLVED IN THE PLAYFULNESS IN PRESCHOOL CHILDREN PROJECT

I (Name)…… undertake to:

- keep confidential information I have access to while involved with the Playfulness in Preschool Children Project
- not divulge any information about the Playfulness in Preschool Children Project to anyone outside the research team;
- not use the information for any other purpose than the collection of specified data for the research project;
- not access any other information from the records other than that required for the research project and approved by the Human Research Ethics Committee;
- ensure that I keep secure the records and information extracted from those records whilst in my possession;
- ensure that any waste paper I generate whilst accessing the records and recording the information required will be destroyed in a manner which is permanent and which ensures confidentiality, eg by shredding.

Name: …….....

Signed: ……..... Date: ……..

APPENDIX 15: Referral information for parenting help

Organisations that may be helpful

This is a guide to some resources that might help if you have any worries about parenting or concerns about your child. These South Australian organisations have internet websites that will also provide you with phone numbers and links to other helpful websites and agencies.

If you don't have internet access at home, free access is available from your local lending library.

Parenting SA (http://www.parenting.sa.gov.au/) **Phone: 8226 7022**

Parenting SA provides parenting resources and support for parents, especially for help with any concerns you might have about your child. It contains easy to follow information about children and their health, development and behaviour.

On the Website you will find…

***Parent easy guides*:** practical, easy to follow tips on a broad range of parenting issues and childhood problems e.g. self esteem, peer pressure, bullying, single parenting, child safety, bedwetting etc. In addition, there is also a range of Aboriginal Parent Easy Guides.

***Parenting Groups*:** Helps you look for parenting groups in your area.

***Web Links*:** From here a range of links with other helpful organisations is available.

Parent Helpline: for the cost of a local call, there is a confidential helpline that is available 24 hours a day, 7 days a week, every day of the year. It provides counselling, support and advice to parents on children's health, relationships, and behaviour. The phone number is **1300 364 100**.

Child and Youth Health (http://www.cyh.sa.gov.au/)
Head Office Phone: 8303 1500 (See Telstra White Pages for Regional Offices)

Parenting and Child Health Pages. Provides the latest information and news on parenting and child health for parents/caregivers and professionals

On the website you will find…

***Question of the week*:** A parent's question of the week is answered and you can look at the answers to previous questions of the week. In addition to this, there are over 300 topics on child health and behaviour to be investigated.

***What's New*:** details recent research and developments in parenting and child care research.

***Tip of the week*:** short tips about parenting and child health and behaviour.

***List of services*:** including details of parenting groups.

Health topics: there are information sheets on a range of children's health topics. You can search this alphabetically. Some include: self esteem, children's mental health, being a parent, attachment.

***Links*:** From here a range of links with other helpful organisations is available.

APPENDIX 16: The final analysis for item misfits

Refer to appendix 6 for descriptions of each of the items

TABLE 10.1 Playfulness data _control file ZOU449WS.TXT Jan 6 9:53 2015
INPUT: 123 Person 27 Item REPORTED: 123 Person 27 Item 4 CATS WINSTEPS 3.72.3

Person: REAL SEP.: 2.91 REL.: .89 ... Item: REAL SEP.: 14.26 REL.: 1.00

Item STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.		PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	Item
14	23	22	1.35	.41	1.86	2.5	1.97	2.7	A	.52	.56	45.5	66.0	Mischief skill
6	15	123	6.12	.31	1.65	2.6	1.53	1.0	B	.19	.43	82.9	89.0	Clowns extent
20	46	44	1.25	.29	1.31	1.5	1.52	2.4	C	.45	.59	54.5	63.7	Enters skill
9	177	108	-.90	.20	1.40	2.6	1.47	2.6	D	.35	.54	58.3	70.5	Persists intens
5	18	123	5.86	.29	1.45	2.1	1.10	.4	E	.38	.45	86.2	87.4	Incorporate ext
16	26	68	4.64	.27	1.38	2.0	1.27	1.0	F	.56	.55	73.5	73.6	Incorporate sk
8	229	123	-1.92	.20	1.29	2.0	1.37	2.1	G	.35	.51	71.5	73.9	Engaged int
2	356	123	-8.18	.31	1.01	.1	1.26	.6	H	.29	.31	89.4	89.4	Decides ext
15	87	84	1.83	.21	1.23	1.6	1.23	1.6	I	.56	.61	61.9	64.1	Pretends skill
27	174	123	.09	.18	1.12	1.0	1.17	1.2	J	.57	.59	66.7	69.3	Transitions skl
17	102	121	2.28	.18	1.16	1.4	1.15	1.2	K	.75	.62	65.3	64.7	Negotiates skl
1	333	123	-6.65	.23	.98	-.1	1.07	.4	L	.47	.47	74.0	76.8	Engaged ext
7	182	123	-.17	.18	.98	-.1	1.07	.6	M	.73	.58	74.8	69.8	Gives cue ext
21	95	123	2.51	.18	1.03	.3	1.01	.1	N	.70	.62	67.5	65.2	Initiates skill
3	365	123	-9.55	.52	1.00	.2	.50	-.5	m	.20	.18	96.7	96.7	Safe extent
4	352	123	-7.83	.28	1.00	.1	.91	.0	l	.34	.35	87.0	86.4	Process ext
24	204	123	-.95	.19	.92	-.6	.91	-.5	k	.58	.55	72.4	70.9	Gives cues skil
22	41	34	1.51	.33	.92	-.3	.89	-.4	j	.54	.58	67.6	63.9	Clowns skill
11	149	123	.88	.18	.81	-1.6	.87	-1.0	i	.38	.61	67.5	66.4	Affect intensit
19	61	121	3.64	.19	.85	-1.2	.80	-1.3	h	.70	.60	72.7	71.1	Supports skill
23	119	122	1.77	.17	.83	-1.5	.82	-1.6	g	.76	.62	66.4	63.8	Shares skill
13	111	123	2.03	.17	.79	-2.0	.78	-2.0	f	.57	.62	73.2	64.4	Modifies skill
12	216	123	-1.40	.20	.76	-1.9	.71	-1.9	e	.49	.53	80.5	72.5	Interact objint
18	129	122	1.46	.17	.73	-2.5	.71	-2.6	d	.80	.62	67.2	63.9	Social skill
25	123	122	1.65	.17	.73	-2.5	.72	-2.5	c	.73	.62	67.2	63.8	Respond cue sk
10	143	123	1.07	.17	.51	-5.0	.49	-5.0	b	.71	.61	82.9	65.6	Social inten
26	240	123	-2.39	.21	.49	-4.3	.42	-4.3	a	.36	.51	89.4	76.3	Interact obj sk
MEAN	152.4	108.7	.00	.24	1.04	-.1	1.03	-.2				72.7	72.2	
S.D.	105.0	29.6	3.93	.08	.32	2.0	.35	1.9				11.3	9.4	

APPENDIX 17: The mean item scores presented with the order of item difficulty in this study and the order of items difficulty presented in the ToP manual (Bundy, 2004)

Items in order of difficulty (current study)	Item score (Rasch)	Study 1 Mean (Raw Score)	Study 1 SD (Raw score)	Items in order of difficulty (ToP manual)	Rasch logit (ToP manual)
Feel safe (extent)	-9.55	2.96	0.199	Feel safe (extent)	2.89
Decides (extent)	-8.18	2.88	0.33	Decides (extent)	2.70
Process (extent)	-7.83	2.87	0.339	Process (extent)	2.64
Engaged (extent)	-6.65	2.7	0.462	Engaged (extent)	2.63
Interacts with objects (skill)	-2.39	1.96	0.299	Transitions (skill)	2.45
Engaged (intensity)	-1.92	1.84	0.551	Interacts with objects (skill)	2.42
Interacts with objects (intensity)	-1.4	1.76	0.464	Gives cues (extent)	2.25
Gives cues (skill)	-.95	1.68	0.564	Interacts with objects (intensity)	2.23
Persists (intensity)	-.90	1.44	0.772	Gives cues (skill)	2.09
Gives cues (extent)	-.17	1.51	0.683	Engaged (intensity)	1.98
Transitions (skill)	.09	1.41	0.665	Social play (extent)	1.98
Affect (intensity)	.88	1.22	0.436	Engaged (skill)	1.95
Social play (intensity)	1.07	1.19	0.52	Reads cues (skill)	1.82
Enters (skill)	1.25	0.39	0.663	Shares (skill)	1.78
Mischief/teasing (skill)	1.35	0.23	0.586	Enters (skill)	1.73
Social play (skill)	1.46	1.11	0.702	Negotiates (skill)	1.71
Clowns skill	1.51	0.37	0.658	Social play (intensity)	1.67
Reads cues (skill)	1.65	1.04	0.661	Persists (intensity)	1.64
Shares (skill)	1.77	1.02	0.71	Social play (skill)	1.54
Pretends (skill)	1.83	0.75	0.756	Initiates (skill)	1.51
Modifies (skill)	2.03	0.91	0.56	Modifies (skill)	1.51
Negotiates (skill)	2.28	0.89	0.801	Pretends (skill)	1.35
Initiates (skill)	2.51	0.83	0.735	Supports (skill)	1.22
Supports (skill)	3.64	0.54	0.632	Mischief/teasing (skill)	1.22
Unconventional (skill)	4.64	0.24	0.546	Affect (intensity)	1.20
Unconventional (extent)	5.86	0.16	0.433	Unconventional (skill)	1.10
Clowns/jokes (extent)	6.12	0.15	0.4	Pretends (extent)	0.59
Social play (extent)	NA	1.83	0.977	Unconventional (extent)	0.47
Engaged (skill)	NA	1.77	0.811	Clowns/jokes (extent)	0.25
Pretends (extent)	NA	0.97	0.987	Mischief/teasing (extent)	0.24
Mischief/teasing (extent)	NA	0.1	0.35	Clowns skill	

APPENDIX 18: Families and Communities Research Ethics Approval

Reference Number: REC2009 -01 -01

Business Affairs

Research Unit

Level 2 (North West) Riverside Building

North Terrace

Adelaide SA 5000

Ms Shelley Wright
School of Health Science
Occupational Therapy
University of South Australia
GPO Box 2471
Adelaide SA 5001

Re: **Research proposal – *Playfulness in Preschool Children: The Impact of Parent Characteristics and Child Abuse and Neglect***

Dear Ms Wright

The Families and Communities Research Ethics Committee re-considered the above research proposal at its meeting on the 27th of May 2009.

On the basis of supplementary information provided to The Committee in your correspondence of 11 May 2009, the ***Committee has granted approval*** for your project.

This approval is valid for a period of 12 months and subject to the following conditions:

- The research is to be conducted in accordance with the 'National Statement on Ethical Conduct in Research Involving Humans'
- A report must be provided to the FCREC on project completion.
- The FCREC must be notified immediately of any adverse events involving participants.
- The FCREC must be notified of any unforseen events affecting continued ethical acceptability of the project.
- Delays of three or more months to the project's commencement must be notified to the FCREC.
- Any significant changes to the project must be submitted for approval by the FCREC before implementation.
- The FCREC must be advised immediately, giving reasons, if the project is discontinued before its completion.

We wish you success with your project.

Yours sincerely

Barry Mortimer
A/Chairperson
Families and Communities Research Ethics Committee

4 June 2009

Contact Officer: Daniel Cox
Contact Phone: 8413 8174

APPENDIX 19: Information sheet for Case Workers (Study 3)

INFORMATION SHEET FOR CASE WORKERS

Project Title: Playfulness in Preschool Children

Researcher: Shelley Wright (Master of Philosophy, Occupational Therapy)
PhD candidate, Division of Health Sciences (OT)
Ph: (08) 8302 2693

Organisation: University of South Australia

This research project aims to find out some of the factors that may impact on preschool children's playfulness, including parent playfulness, parenting and child abuse and neglect. Playfulness is a child's approach to play or their style of play and includes aspects such as how much they are absorbed in their play, their level of enthusiasm in their play, how much they like to direct their own play, and whether they joke or 'clown' around. Playfulness is an important characteristic because children who are playful are more likely to develop better coping skills and flexible thinking.

I am asking whether you could help to recruit children and families for study 2 of the project which has been approved by the University of South Australia's Human Research Ethics Committee and also has been approved by (name of agency). Please find the approvals attached. For study one I am recruiting 4-year-old preschool children through the Department of Education and Children's Services in order to examine general factors that may impact on playfulness. For study 2, I am needing to recruit 4-year-old children (and their families) who attend preschool or kindergarten and who have also been the subject of a substantiated notification of abuse and/or neglect. It is also important that the children do not have a disability or significant developmental delay as research has found that playfulness is affected by disability, and this study is aiming to look at new areas.

If you agree to assist, perhaps you could post an information kit (containing Parent Information Sheet and a consent form) to each family meeting the eligibility criteria.

The project involves parents filling out a demographic questionnaire and coming to a brief interview (5 – 15 minutes), assessment of the child's playfulness at their preschool (30 minutes of observation: 15 minutes indoor play, 15 minutes outdoor), and asking the preschool teacher most familiar with the child to fill out a brief questionnaire regarding the child's development and how they relate to others. Playfulness is assessed using the Test of Playfulness, and the researcher has had formal training in the assessment at the University of Sydney.

All records containing personal information about each child and family will remain confidential and no information which could lead to their identification will be released. Involvement from families is completely voluntary, and it is very important that the decision to participate is completely theirs. Should you agree to help with recruitment, you may contact the following people if you have any queries or concerns: the researcher, Shelley Wright on (08) 8302 2693; or Shelley's supervisor, Dr Fiona Arney on (08) 8302 4172. This project has been approved by the University of South Australia's Human Research Ethics Committee. If you have any ethical concerns about the project or questions about your rights as an informant please contact the Executive Officer of this Committee, Tel: +61 8 8302 3118; Email: Vicki.allen@unisa.edu.au. The Project has also been approved by the DECS Research Unit, and the contact person for any concerns is: (Name), DECS Research Unit (Phone number).

Please let me know if you would like a copy of the summary of the findings when these become available.

APPENDIX 20: Information sheet for parents (Study 3)

INFORMATION FOR PARENTS

Playfulness in Preschool Children

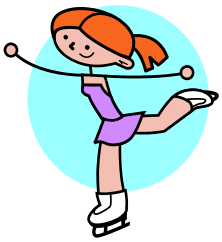
University of South Australia
Division of Health Sciences

Introducing myself

My name is Shelley Wright and I am a PhD student at the University of South Australia and an occupational therapist with many years experience of working with young children and their families. I would like to invite you and your child to participate in my research project. You can contact me on (08) 8302 2693.



About the project



The aim of this research project is to find out some of the things that may influence preschool children's playfulness. Playfulness is how a child approaches play or their style of play and includes things like: how much they focus on their play, their level of enthusiasm in their play, how much they like to direct their own play, and whether they joke or 'clown' around. Playfulness is important because children who are playful are more likely to develop better coping skills.

I am interested in your involvement if you:

- Are your child's parent/ primary caregiver
- Speak English (otherwise it will be difficult to read the questionnaires)
- Have a 4-year-old child who does not have a disability or significant delay in development and who attends preschool (research has already found that playfulness is affected by disability and delays in development, and this study is aiming to look at new areas)
- Have received services from Families SA (or equivalent) regarding child protection concerns.

The project involves asking you to come and talk about your child and your family for about 15 to 20 minutes, observing and videotaping your child's playfulness at preschool for 30 minutes, and asking your child's preschool teacher to fill out a brief questionnaire**.** If you

choose to take part in the study, you will receive $30 to reimburse you for your time and inconvenience.

What I will be asking you about

My talk with parents will probably take about 15 to 20 minutes and I can see you either at …….. (name of agency) or at your child's preschool. I will be asking you:

- general things that could or do influence a child's playfulness such as family make-up (number of siblings, number of people in the household, parent ages etc), income, significant events in your child's life etc
- to describe your child.

With your permission, I will tape the brief discussion when you describe your child (no other parts of the discussion will be taped) and then I will write notes from the tape – this is the recommended procedure for collecting that information and helps to give consistent results. The notes I keep will not include any information that could identify you. If you do not want me to tape the interview, I will take notes.

What will the session with your child involve?



I will observe and videotape two 15 minute observations of your child playing at preschool – 1 indoor and 1 outdoor observation. I have attended training in the assessment at the University of Sydney. The observations are best done when your child is playing with others. I will send an electronic copy of the videotape (e.g. on DVD) by registered mail to an independent researcher from the University of Sydney. The independent researcher will not have any identifying information about you or your child and will rate the Test of Playfulness from the DVD to make sure that the study results are not biased.

What will I be asking preschool teachers?

Teachers will be asked to complete a brief questionnaire involving information about:

- Your child's development
- How your child relates to other people.
- Whether your child's play on the day I observe is typical for your child (e.g. if your child is unwell or tired on the day, it will influence their playfulness).

What will happen to the information you give me?

The information that you and your child's teacher give, along with the information on your child's playfulness, will be combined with information from many other families to write a collective report about things that may influence children's playfulness. Your personal information will not be used individually in any report.

All records containing personal information about you will remain confidential and no information which could lead to your identification will be released. Your information will be given a code number and kept in locked filing cabinets in the researcher's office within the School of Health Sciences at the University of South Australia for 7 years, in order to meet Freedom of Information requirements.

Your participation

It is entirely up to you if you want yourself and your child to be involved and you can also change your mind about taking part at any time without having to give a reason. This will not affect the services provided to you by (name of the agency) in any way. I don't think any problems should arise for you from taking part in the project, but if you do become upset in any way, please contact the researcher, Shelley Wright on (08) 8302 2693 or Shelley's

supervisor, Dr Fiona Arney on (08) 8302 4172. There is also a flyer attached which has information about helpful organisations. All the information you provide is confidential. The only time I would need to pass on information is if I heard something that made me concerned that a child was at risk. Telling Families SA about these concerns is mandatory for all researchers.

The research has been approved by the University of South Australia's Human Research Ethics Committee, the Department of Education and Children's Services (DECS), (Centacare, Anglicare) and Families SA. The contact people for each of the ethics committees are listed below. You may contact them if you have any ethical concerns about the project or questions about your rights as a participant.

- Ms Vicki Allen, Executive Officer, University of South Australia's Human Research Ethics Committee: Ph (08) 8302 3118
- (Name and phone number of agency contact person)
- (Name and Phone number of Families and Communities REC contact person)

Please let me know if you would like a copy of the summary of the research report. You can either receive this through the agency you attend or you can provide an address / email address so they can be posted. Your address and any identifying information will be kept separately from the other information you provide me.

Shelley Wright
PH: 8302 2693

APPENDIX 21: Consent form (study 3)

Consent Form

Project Title: Playfulness in Preschool Children

Researcher's Name: Shelley Wright

Supervisors' Names: Dr Fiona Arney
Associate Professor Jenny Ziviani

I agree to take part in this research project which involves myself and my child, …… as well as information from my child's teacher.

I understand that taking part in the research study is completely voluntary and I can:

- Withdraw my consent by contacting the researcher or the researcher's supervisor without affecting my child's preschool program (or services received by particular agency).
- Stop the interview at any time or decline to answer questions
- Have a support person present during the interview

I also understand that, with my consent, the interview with me about my child will be audiotaped, and the observation of my child's play will be videotaped and burned onto DVD to be rated by an independent researcher at the University of Sydney (who has no access to identifying information). I am aware that the tapes and DVDs will be kept in a locked filing cabinet at the University of South Australia, and that only the researchers on this project will have access to it. I also understand that information about myself and my child will be kept in a locked filing cabinet in the researcher's office in the School of Health Sciences at the University of South Australia for 5 years, as required by the University of South Australia.

I agree to take part in the project on the understanding that the researcher will not reveal my name/ my child's name or any information that could identify me or my child in any reports produced as part of the research**.** I understand that I will receive $30 to reimburse me for my time and inconvenience.

- ❒ I agree to provide information on my child and to take part in an interview
- ❒ I agree to the interview with myself being taped
- ❒ I DO NOT agree to the interview with myself being taped
- ❒ I agree to my child being videotaped at the ……..….kindergarten or preschool
- ❒ I agree to my child's teacher providing information about my child's development and the way he/ she relates to others
- ❒ I wish to receive a summary of the research findings

Name of participant: …….

Signed: ……..… Date: ……..

Contact Phone No: _____ (needed for Shelley to contact you about organising a convenient time for the interview).

Preferred Contact Time: _____

I have provided information about the research to the research participant and believe that he/she understands what is involved.

Researcher's Signature: …… Date: ……

APPENDIX 22: Demographic information gathered in an interview (study 3)

Participant No.: _____

About your family

5. What is the sex of the child in this study? Male ❒

   Female ❒

6. What is the age of the child in this study (in years and months e.g. 4 years 3 months)?

   _____ years _____ months

7. Does this child have any illness or disability? No ❒

   Yes ❒

   If yes, please specify (including any time spent in hospital) _____

   _____

   _____

8. Please describe any significant life events [illegible] child and when these events happened (e.g. parent separation, death of a parent or sibling, significant period in hospital, loss of a pet, long stays with relatives, extended serious illness of a parent).

   _____

   _____

30. What are the ages of <u>all other</u> dependent children (18 years or younger) in your home?

    _____ _____ _____ _____ _____

31. Does your child have any other siblings who do not live in your home? If so, what are their ages?

    _____ _____ _____ _____

32. Does this child have any shared parenting arrangements? No ❒

    Yes ❒

33. If so, do these involve going to another household

    1 weekend per week (or equivalent)? ❒

    1 weekend per fortnight (or equivalent)? ❒

Half time? ❒

Other arrangement? ❒ Details? _____

_____

34. Does this child attend child care? No ❒
Yes ❒

If yes, for how many years has this child attended child care? 1 year ❒
2 years ❒
3 years ❒
4 years ❒

Approximately how many hours per week has this child attended child care?

Less than 15 hours ❒
15 – 24 hours ❒
25 – 40 hours ❒
More than 40 hours ❒

35. Which of the following best describes your relationship to the child in this study?

Natural mother ❒ Natural Father ❒
Stepmother ❒ Stepfather ❒

Other (Please describe): _____

36. Which of the following best describes the parents living in the child's household?

Two natural parents ❒
Mother and stepfather/defacto ❒
Father and stepmother/defacto ❒
Mother alone ❒
Father alone ❒

Other (please describe):_____

Preamble for demographic interview in study 2: As you are aware, I am interested in looking at factors that may affect playfulness in children. If we find out a bit more about this, then we may be able to find ways to help children to develop strong coping skills to help them throughout life. We already know that many things can influence or have the potential to influence a child's playfulness. These may include things like what order a child is born into a family (whether they are 1st or 4th), ill health, family environment, child abuse or neglect, disability, age of parents. So, I am interested in the following information just in terms of the experience of your child, and I am not at all interested in who else was involved, in judging or in finding blame. This information will not be shared with anyone.

37. Have you received services from an agency in relation to child protection concerns, for example from Families SA (or DOCS, FAYS, Child Safety or equivalent in other states)?

No ❒
Yes ❒

If you feel comfortable, could you tell me a little more about what the Families SA concerns involved?

38. In which country was the mother (or parental mother figure) born?

_____

39. Which cultural group does the mother (or mother figure) most identify with?

_____

40. What is the mother's (or parental mother figure's) age? _____

41. What is the usual occupation of the mother (or parental mother figure) in the child's household?

_____ (Please describe)

42. Is the mother in the child's household currently in paid employment?

No ❒
Yes ❒

43. What is the mother's (or parental mother figure's) highest completed level of schooling?

Primary school ❒
Some years of high school ❒
Year 12, Matric or equivalent ❒
Technical, trade or TAFE certificate ❒
Tertiary qualifications ❒

44. In which country was the father (or parental father figure) born?

_____

45. Which cultural group does the father (or father figure) most identify with?

_____

46. What is the father's (or parental father figure's) age? _____

47. What is the usual occupation of the father (or parental father figure) in the child's household?

_____ (please describe)

48. Is the father in the child's household currently in paid employment?

No ❒
Yes ❒

49. What is the father's (or parental father figure's) highest completed level of schooling?

Primary school	❒
Some years of high school	❒
Year 12, Matric or equivalent	❒
Technical, trade or TAFE certificate	❒
Tertiary qualifications	❒

50. Does your family receive any pension or benefit?

No	❒
Yes	❒

If yes, please describe _____

51. Is your family's annual income:

Less than $20, 000	❒
$20,000 - $34,000	❒
$35,000 - $49,000	❒
$50,000 - $64,000	❒
$65,000 - $80,000	❒
More than $80,000	❒

Thank you for your help in completing this interview. Would you like to receive a summary of the research findings when the study is completed? If so, please provide your address or email address so that a summary of results can be sent to you. This information will be kept separately from the other information you have provided.

Address: _____

_____

_____

OR
Email address: _____