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**I WONDER WHAT IS INSIDE?**  
**THE ROLE OF IMAGINARY PLAY IN**  
**YOUNG CHILDREN'S DEVELOPMENT OF**  
**EMOTION REGULATION**

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**Johanna Alice Pibal**

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### **Abstract**

Imaginary play is one form of social interaction whereby young children are able to develop skills and strategies for regulating emotions. This research aimed to extend an earlier study (Galyer & Evans, 2001), and further explore the relationships between children's play, emotion regulation and social skills, within a natural setting and in a wider context. The participants were 40 preschool boys and girls who were assessed by means of the imaginary play questionnaire, Emotion Regulation Checklist, Social Skills Rating System: Preschool Form, as well as observations of imaginary play, emotion regulation, and social skills within storytelling and imaginary play activities. Children with more positive emotion regulation skills had well developed assertive and cooperative skills while their assertive, cooperative and self control skills were all related. The imaginary play activity showed children who continued pretence and who were less reliant on visual confirmation were more able to regulate their emotions. The findings add further support for the relationship between imaginary play and emotion regulation, however additional research is recommended to define the qualities of the parent's/caregiver's and children's social interaction within imaginary play and how this influences children's development of emotion regulation.

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## Foreword

My interest in young children and families began when I became a mother. Having children allowed me opportunities to interact with a wide range of people due to wanting to provide varied learning experiences for my children. The most important learning experience for my young children and for myself was with Playcentre.

Within the twelve years that I was an adult member of Playcentre, I was able to experience many roles at Centre and Association levels including parent, student, tutor, education convenor and honorary advisor, to mention a few. The various roles enabled me to observe and interact with diverse groups of children and families, both informally and formally through receiving and providing early childhood education. Every one of the roles I undertook gave me a different perspective on the relationships between parents/caregivers and children.

When working in Playcentres I would notice the children and families who needed extra care and support. I came to realise that career wise I didn't want to give a little to many of people, rather, I wanted to work professionally with fewer families giving them as much specialised help as possible. I started studying at universities, as I wanted evidence-based knowledge to complement my experience in order to develop a competent, respectful working approach. The training and qualifications I have completed include the Playcentre Federation Certificate, BA psychology/education, BA (Hons.) psychology, Postgraduate Certificate in Child Mental Health, Family Therapy Certificate and now an MA psychology, which together with my early childhood experience have given me a solid foundation for beginning specialised work with children and families.

For the past few years I have been employed as a Child and Family Therapist, providing parent education programmes for groups of parents (usually Child, Youth and Family Services referred), and assessments/interventions for individual children and families. Parents or other involved agencies make contact, as they are concerned about children who are generally presenting with emotional difficulties and accompanying behaviours. As parents and their relationships with the children are hugely influential on children's development, I have always included them in the process. The goals we set, learn about, and practice within our time together are always more readily achieved when the parents are 'on the same page', when everyone feels valued and supported, and when the learning is transferred and reinforced in the home.

Every intervention has included at least one aspect of learning about managing emotions. Whether the overwhelming, unpleasant emotions present through anger, anxiety, or grief, children and their families need extra help learning to recognise how they feel, what their emotions are named, how to regulate the level of arousal, and how to appropriately express or communicate their emotions within the context of their family, and elsewhere.

In an ideal world there would not be a need to provide interventions for children who are yet to develop adequate strategies and skills for managing their emotional experiences; unfortunately this is not the case. The next best approach for helping children is a preventive one. By studying young children's normative development and gaining understanding of influential variables, it becomes possible to educate parents/caregivers with evidence-based knowledge that informs their social interaction with children, thereby enhancing children's development. Hence, the focus of this research is young children's development of emotion regulation.

## **Introduction**

The human experience of emotion has been a longstanding area of interest both within the lay community and the academic world. Although there are individual and cultural differences in beliefs regarding emotions, people generally tend to seek out opportunities that evoke pleasant emotions, and avoid experiences that may result in unpleasant emotions. Emotions can be thought of as an internal monitoring system that informs us of potential or actual comfort or discomfort, and even safety. Being able to adjust the intensity of emotional arousal to a level that is tolerable yet flexible enough to enable adaptive behaviour has been referred to as emotion regulation in much of the literature. Competency in emotion regulation is considered to be a fundamental aspect of positive mental health.

Limited development of the ability to regulate emotions can have far reaching implications, which present as emotional and behavioural difficulties from early childhood to adulthood. Various difficulties associated with emotion regulation can stem from an infant's biological predispositions and parent/caregiver responsiveness (Zeidner, Matthews, Roberts, & MacCann, 2003), yet it can also emerge from constraints in language and social skills (Calkins, 1994). Without the successful acquisition of adequate emotion regulation skills and strategies in childhood, individuals are more vulnerable to developing mood disorders such as anxiety and depression as they reach adolescence or adulthood.

Along with recognition that the ability to regulate emotional arousal begins to develop in early childhood, comes an appreciation of the important role that parents<sup>1</sup> provide in assisting this development. Social interaction between parents and children brings many opportunities for children's socio-emotional learning, which is primarily through the modes of language, modelling/observation and reinforcement

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<sup>1</sup> Parents also includes legal guardians and de facto caregivers.

(Eisenberg, et al., 2003; Galyer, & Evans, 2001; Zeidner, et al., 2003). Although the child's learning of emotion regulation can occur through social interaction in everyday living, one particularly influential means of learning to regulate emotional arousal is through imaginary play (Berk, 2004; Cutting, & Dunn, 2006; Galyer, & Evans).

Imaginary play has been identified in previous literature as being a learning context that has great potential for children's development of emotional regulation skills (Berk, 2004; Galyer, & Evans, 2001; Lindsey, & Colwell, 2003; Russ, 2004), especially when experienced play partners are involved (Galyer, & Evans). As intense emotions are interwoven throughout children's imaginary play experiences, learning to regulate emotional arousal within this process is highly probable.

Research-based knowledge of the role of imaginary play and the development of emotion regulation and social skills is potentially of great value for parents who are committed to encouraging children's optimal development of emotion regulation, alongside support for professionals who provide play therapy interventions for children who need extra assistance in this area of development.

### ***Emotion in Children's Development***

The concept of emotion regulation has been receiving considerable attention due to changes in perceptions and definitions regarding emotions (Gross, 1999; Keltner, & Gross, 1999; Thompson, 1994). Previously, the approach towards understanding emotional development was primarily focused on intra-personal processes such as the regulation of the intensity of a discrete set of feelings and the management of their expression. More recently however, the focus has shifted towards a functional approach, in which the relationships between people and their environments provide further context for exploring and understanding emotions and their development (Campos, Mumme, Kermoian, & Campos, 1994).

The earlier emphasis on intra-personal processes provided physiological descriptions of neural activity, and descriptions of behaviours, facial expressions and moods that were labelled and categorised into a limited set of distinct affect states by psychologists and psychiatrists (Kagan, 1994). This set of affect states was further differentiated by the notion of the existence of “bad” feelings like anger, disgust and fear, and “good” feelings like excitement, joy and love (Campos, Frankel, & Camras, 2004), or, as otherwise described by Kagan, feelings of “displeasure” or “pleasure.”

Although labelled affective states can provide a reasonable starting point for general communication regarding emotions, the potential for subjectivity is vast and ever-present, and consequently there has been much debate in psychology and other related professions regarding the validity of the categorisation of emotions based on response characteristics (Matthews, Zeidner, & Roberts, 2002; Keltner, & Gross, 1999). The need for the development of a credible framework that enables objective understanding and communication of individual experiences of emotions became clear (Kagan, 1994), bringing a change of focus in the classification of emotions from response characteristics to that of functions (Keltner, & Gross).

The functionalist approach to emotions provides a framework for understanding emotions in a relational context (Campos, et al., 1994; Campos, et al., 2004; Keltner, & Gross, 1999; Mayer, Salovey, Caruso, & Sitarenios, 2001; Thompson, 1994). Functions themselves are proposed to be systems in which causes and particular consequences for goal-directed behaviours are contained (Keltner, & Gross). It is therefore important to understand the functions that certain behaviours may fulfil in order to attempt interpretation of an individual’s experience of emotions (Campos, et al., 2004).

The relational phenomenon of emotion is thought to be the outcome from a person-event transaction that is of particular significance to the individual (Campos,

et al., 1994; Campos, et al., 2004). So central is this relational context of emotion that Campos, et al., (1994) described the individual and the event as an “indissociable whole”. It appears that the meaning of the event for the individual determines the emotion that is experienced (Campos, et al., 1994). Why then, might a person-event transaction be considered significant to an individual?

Keltner and Gross (1999) contend that person-event transactions hold importance for an individual when the context is one of adaptation to challenges and opportunities to physical and social survival within the human environment. Challenges and opportunities can arise through person-event transactions that are related to goals, hedonism, social communication, or memories of past experiences (Keltner, & Gross).

The intensity and quality of an individual’s emotion can be influenced through the potential or actual effectiveness of an event contributing to a goal (Campos, et al., 1994; Campos, et al., 2004). For instance, if a child has the goal of winning the birthday party game of Pass the Parcel, the potential of achieving this goal through the behavioural event of participation would arouse either anticipation or excitement. The event of passing the parcel to the next child would block the goal resulting in disappointment, and the event of opening the last layer of wrapping would achieve the goal, thus inducing happiness.

Hedonism can contribute to the generation of emotion in terms of motivation. Previous stimulation of auditory, olfactory, tactile and visual senses, that have resulted in pain or pleasure tend to motivate aversion or desire respectively, when the potential for similar experiences arise (Campos, et al., 1994; Campos, et al., 2004). The child who has previous experience of disappointment for not winning Pass the Parcel may have some aversion to playing the game again, whereas the child

who has previous experience of happiness from winning the game will be more likely to have a desire to play.

Social communication can also be influential on emotions and behaviour (Gross, 1999; Campos, et al., 1994; Campos, et al., 2004), either with or without intention (Gross; Campos, et al., 1994.). Facial expressions, physical gestures and language can each be social signals through which emotions can be present or observed (Campos, et al., 2004). Social signals allude to whether person-event transactions have the potential to be, or are being experienced, as “good or bad” (Gross), which in itself, is largely determined by the context and by the culture (Campos, et al., 2004). Social signals also have the capacity to induce emotions in another individual, potentially influencing both the intensity and the quality (Campos, et al., 2004), again highlighting the relational context of emotions. An example is emotional contagion, whereby the evident emotion of one individual gives rise to a similar emotional experience in another individual, which can be observed even from infancy through contagious crying. Social referencing also influences an individual’s emotions and behaviour through their perceived approval or disapproval from another and the consequent adaptation of responses (Campos, et al., 1994; Campos, et al., 2004).

Memories of previous experience is a theme that is present within goals, hedonism and social communication, as well as being significant in the generation of emotions in itself. The connection between previous experience and current self-management defines the functionalist approach from other theories of emotions (Campos, et al., 1994). An example of this connection is the concept of the working model developed by attachment theorists such as Bretherton (as cited in Campos, et al., 1994; Cassidy, 1994; Laible, & Thompson, 1998; Oppenheim, Nir, Warren, & Emde, 1997), in which parent child interactions influence socialisation (Campos, et



al., 2004). Early experiences of parent child interactions are thought to create a social, emotional internal representation, which in turn influence later emotional approaches and responses in social interactions.

Knowledge of possible significant challenges and opportunities to physical and social survival that result in the generation of emotions brings us to the individual's management of their emotional experiences, their emotion regulation (Keltner & Gross, 1999).

### ***Emotion Regulation***

Emotion regulation as a concept originated in the developmental studies of the early 1980's (Gross, 1999). The regulation of emotion has been described as a "complex, multi-dimensional process" (Cole, Michel, & O'Donnell Teti, 1996) that can occur even before an emotion becomes observable (Campos, et al., 2004; Gross), within an unconscious to conscious continuum (Gross). As defined by Thompson (1994), "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" (p.27-28).

In accordance with the functionalist approach, emotion regulation entails the utilisation of processes and strategies to manage the intensity of emotional arousal to a level that is acceptable yet also flexible enough to enable the outcome of adaptive, social behaviour (Calkins, 1994; Campos, et al., 1994; Cicchetti, Ganiban, & Barnett, 1991; Suveg, & Zeman, 2004; Zimmerman, & Stansbury, 2003). Internal processes have been described as involving the initiation, maintenance and modulation of physiological emotional responses and cognitive processes, while external strategies have been described as behaviours enlisted to regulate the actual emotional experience (Grolnick, Bridges, & Connell, 1996; Kalpidou, Power, Cherry, & Gottfried, 2004; Penza-Clyve, & Zeman, 2002). Emotion regulation is therefore



comprised of both internal processes and external behavioural strategies (Grolnick, et al.), which work together to “avoid, displace, transform, minimise, inhibit or intensify” emotional experience (Campos, et al., 1994).

The regulation of emotions is a continuous, active process (Campos, et al., 1994; Thompson, 1994), which can influence both the intensive and temporal qualities of emotional experience (Thompson). Various “response dynamics” of emotion regulation include the pace of onset, intensity or magnitude, duration, lability and recovery time (Gross, 1999; Thompson). Differences between individual experiences of emotions can be attributed to the person’s management of these intensive and temporal qualities, and from the functionalist perspective, the individual’s goals.

Individuals are thought to be able to regulate their emotional experiences at three different stages; input, central processing and output. Input regulation is at the sensory level whereby the individual can either enhance or subdue emotional arousal through strategies such as focus of attention, denial, distraction and choice of environment. At the central processing level, information can be appraised and reappraised to change meanings and goals in order to enhance, subdue, adapt and transform emotions. Defence mechanisms including displacement, conscious suppression, unconscious repression and reaction formation, along with arousal transfer, intensification and humour can each be utilised in the central processing level. The output level is where individuals select a response to meet the emotional demands of a person-event transaction. Emotion can be regulated at output through disguise, inhibition, restraint, and transformation (Campos, et al., 1994). In essence, emotion regulation can be described as “the ways individuals influence which emotions they have, when they have them and how they experience and express these emotions”, (Gross, 1999, p.557). Individual development of processes and

strategies at the input, central processing and output stages of this continuous, dynamic process of emotion regulation begins in early childhood and continues progressively through an individual's lifespan.

### ***The Development of Emotion Regulation in Early Childhood***

Early childhood is considered to be a vital time in the development of emotion regulation (Dennis, 2006; Grolnick, et al., 1996; Kalpidou, et al., 2004; Shields, & Cicchetti, 1997). In infancy, children depend on parents to regulate their arousal; then gradually throughout early childhood children start to develop the processes and skills that enable them to increasingly self-regulate (Calkins, 1994; Cole, Zahn-Waxler, Fox, Usher, & Welsh, 1994). The early development of emotion regulation is an incremental and ongoing multi-dimensional process that ultimately integrates biological, cognitive and socio-emotional components (Calkins, 1994; Galyer, & Evans, 2001; Denham, Zoller, & Couchoud, 1994).

Calkins (1994) outlined internal sources of individual differences in emotion regulation including the neuroregulatory systems of brain activity, endocrine activity and vagal tone, alongside the behavioural traits of attentiveness, adaptability/reactivity to novelty, resistance/reactivity to frustration, level of interest, sociability and soothability. The principal nerve in the parasympathetic nervous system, the vagus nerve, can decrease physiological processes such as the heart rate, through its tonic firing. Children's baseline vagal tone has been associated with their approach to novelty, attention, behavioural reactivity, soothability and self-soothability (El Shiek, Harger, & Whitson, 2001).

The biological predisposition of an infant was considered by Zeidner, et al., (2003) to be the foundation that emotion regulation skills are built upon. When an infant is born with a low threshold for arousal, this predisposition can challenge parenting responsiveness and consequently influence the growth of neural circuits in

the child impacting on their emotional competence. Although children's neural circuits are generally malleable throughout childhood, the critical time for emotional learning is in the first two to three years of life. Highly inadequate parent-child interactions at this time may therefore result in a diminished capacity of neural substrates for emotion regulation (Zeidner, et al., 2003). The meta-emotion philosophy of parents also influences parenting, which in turn is thought to affect children's regulatory physiology and subsequent ability to regulate their emotions (Gottman, Fainsilber Katz, & Hooven, 1996).

Children's ability to regulate emotion is increasingly influenced by the maturing of their cognitive processes (Calkins, 1994; Campos, et al., 2004; Denham, et al., 1994; Laible, & Thompson, 1998; Stansbury, & Sigman, 2000; Zimmerman, & Stansbury, 2003) and consequently older children increasingly deploy cognitive strategies instead of behavioural responses to regulate emotions (Zeidner, et al., 2003). Various cognitive components are involved in the development of emotion regulation strategies and skills including internal working models (Calkins, 1994; Cassidy, 1994; Laible, & Thompson; Thompson, 1994), social referencing, recognition of appropriate regulation, individual potential for utilising strategies (Calkins, 1994), theory of mind (Stansbury, & Sigman), and awareness of consequences (Zeman, & Penza, 1997). The complex strategy of cognitive reappraisal, whereby children become increasingly able to re-interpret information is an emotion regulation strategy that also emerges in early childhood (Stansbury, & Sigman; Thompson). Together, these cognitive components interweave to become an intricate set of information processing skills for young children's understanding and subsequent deployment of emotion regulation responses (Calkins, 1994).

There is widespread support for the social interaction between parents and children in infancy and early childhood being of utmost importance in children's

developing capacity to understand and regulate emotions (Calkins, 1994; Cassidy, 1994; Dennis, 2006; Eisenberg, et al., 2003; Galyer, & Evans, 2001; Laible, & Thompson, 1998; Stansbury, & Sigman, 2000; Thompson, 1994; Valiente, & Eisenberg, 2006; Zeidner, et al., 2003; Zeman, & Penza, 1997). Functionalist theory asserts social interaction to be pivotal for the development of emotion regulation skills. Early relationships and experiences within families provide children with opportunities both for learning about emotions and their functions, and for the development and practice of strategies and skills for managing their emotions adaptively (Cole, et al., 1994; Zeman, & Penza). The three central modes of socio-emotional learning include language (Denham, Zoller & Couchoud, 1994; Eisenberg, et al.; Galyer, & Evans; Laible, & Thompson; Oppenheim, et al., 1997; Zeidner, et al.), modelling and observation (Berk, 2004; Calkins, 2004; Cole, et al.; Denham, et al.; Eisenberg, et al.; Galyer, & Evans; Zeidner, et al.), and reinforcement (Cole, et al.; Calkins, 2004; Eisenberg, et al.; Galyer, & Evans; Laible, & Thompson; Zeidner, et al.; Zeman, & Penza).

The rapid development of comprehension of emotion regulation in early childhood is largely due to children's improved proficiency in language (Campos, et al., 2004; Cole, et al., 1994; Denham, et al., 1997; Zeidner, et al., 2003). When parents engage children in conversations rich with explanations for emotion experiences, children develop understanding of emotion (Berk, 2004; Denham, et al.; Laible & Thompson, 1998), which alongside increased coherency and fluency in language, enables children to identify and articulate emotions (Denham, et al., 1997; Laible, & Thompson,) that describe the emotive state of themselves and of other people (Laible, & Thompson; Oppenheim, et al., 1997). Language also enables children's understanding of feedback on emotions from others (Denham, et al.) and provides them with the means for processing and understanding the causality of

emotions (Denham, et al., 1997; Laible, & Thompson, 1998). Hence, the child with a developmental delay in language will subsequently be very likely hindered in their development of emotional regulation (Zeidner, et al., 2003).

Emotion regulation modelled by parents and significant others, and observed by young children provides opportunities for indirect learning of skills (Denham, et al., 1994; Eisenberg, et al., 2003; Zeidner, et al., 2003; Zeman, & Penza, 1997).

“Teaching by example” (Zeidner, et al.) can contribute to children learning both functional and dysfunctional emotion regulation skills depending on whether they primarily observe positive or negative emotion expression and responses (Cole, et al., 1994; Galyer, & Evans, 2001; Zeidner, et al.). Children can indirectly learn feeling, coping and display rules that are context specific, or socially and culturally appropriate, from observing the modelling of others (Zeidner, et al.; Zeman, & Penza).

Varied, direct reinforcement from different social contexts also influences children’s developing understanding of emotion regulation and expression. From early childhood, children’s knowledge and use of emotion display rules are shaped by previous reinforcement then consequent expectations of the probability of support from others, which is goal oriented behaviour and therefore functional in nature (Laible, & Thompson, 1998; Zeman, & Penza, 1998). Children’s emotional behaviour can be reinforced or extinguished by the responses from parents and significant others, either with or without intention (Zeidner, et al., 2003). For instance, children’s positive expression of emotion may be responded to with encouragement and support while dysfunctional emotional expression such as tantrums may receive little or negative attention (Dennis, 2006; Eisenberg, et al., 2003; Galyer, & Evans, 2001; Zeidner, et al.).

With social interaction asserted by functionalist theory to be vital in young children's acquisition of emotion regulation strategies and skills, establishing modes of interaction that are particularly influential is important. The relationship between children's imaginary play and development of emotion regulation is one such mode (Berk, 2004; Cole, et al., 1994; Cutting, & Dunn, 2006; Galyer, & Evans, 2001; Laible, & Thompson, 1998; Lindsey, & Colwell, 2003; Moore, & Russ, 2006; Oppenheim, et al., 1997; Russ, 2004; Russ, 2005; Russ, Pearson, & Sacha, 2007) especially when parents are actively involved (Bornstein & Tamis-Le Mond, 1995; Fein, & Fryer, 1995; Galyer, & Evans; Keren, et al., 2005).

### ***Imaginary Play***

The numerous names for imaginary play including fantasy play, free play, pretend play, make believe play, and symbolic play reflect the numerous possibilities within the play itself. However, these names all allude to play in which feelings, behaviours, thoughts and objects are symbolic representations and transformations of previous experiences. Being able to participate in imaginary play assumes the child has developed two mind processes, the first in the literal sense and the second with an enriched meaning (Fein, 1989).

Imaginary play is influential in children's development of cognition (Cole, et al., 1994; Fein, 1989; Galyer, & Evans, 2001; Russ, 2004; Russ, 2005; Russ, et al., 2007), a coherent sense of self (Keren, et al., 2005), creativity (Keren, et al.; Moore, & Russ, 2006; Russ, et al.), emotion regulation (Berk, 2004; Cole, et al.; Cutting, & Dunn, 2006; Galyer, & Evans; Keren, et al., 2005; Laible, & Thompson, 1998; Lindsey, & Colwell, 2003; Moore, & Russ; Oppenheim, et al., 1997; Russ, 2004), linguistics (Cole, et al.; Cutting, & Dunn; Keren, et al.; Laible, & Thompson) and social skills (Galyer, & Evans; Keren, et al.; Lindsey, & Colwell; Russ, 2004; Russ,

2005). In the current research, however, the focus was on the relationship between imaginary play and the development of emotion regulation and social skills.

The context of imaginary play is one in which there is great potential for children to learn how to competently regulate their emotions (Berk, 2004; Galyer, & Evans, 2001; Lindsey, & Colwell, 2003; Russ, 2004). With intense emotions interwoven throughout imaginary play (Russ, 2004), Fein and Fryer's (1995) claim that the primary function of imaginary play is learning how to regulate the arousal of emotions seem highly plausible. Children are able to practice regulating their emotions, experimenting with both the intensive and temporal qualities, indirectly through imaginary play (Moore, & Russ, 2006). The rudimentary purpose of imaginary play lies with the emotions to be explored and mastered and not with the particulars of the play itself (Russ, et al., 2007).

Through the spontaneous process of imaginary play, children are able to safely re-visit experiences enabling them to express and work through any resultant, unresolved pleasant or unpleasant emotions and thoughts in a non-threatening environment (Keren, et al., 2005; Moore, & Russ, 2006). Imaginary play ultimately provides the opportunity where children are able to explore their perception of reality through reproducing and modifying the meaning of affectively arousing events (Fein, 1989; Lindsey, & Colwell, 2003; Russ, et al., 2007). By managing conflict, emotions, and even trauma adaptively (Keren, et al., 2005; Moore, & Russ), such play allows children to gain a sense of mastery over a situation (Moore, & Russ, 2006; Russ, et al., 2007). Imaginary play is a mode of communication, which was described by Gottman (as cited in Bretherton, 1989) as "young children's version of self disclosure". Children's mastery of emotions through imaginary play helps them to develop emotion regulation skills and strategies that may later be applied in real life situations.



Support for the relationship between emotion regulation in an imaginary play context and emotion regulation in daily life was one of the findings from Galyer and Evan's (2001) research whereby young children's emotion regulation within an imaginary play experimental setting was correlated with the children's emotion regulation in everyday living. Miles and Reiss (as cited in Russ, 2005) also found support when young children in three varied, separation themed imaginary play groups became better able to regulate their separation anxiety in real life compared to children in a neutral group.

Imaginary play has also been shown to influence various aspects of children's adaptive functioning such as coping in medical settings. A review of literature by Moore and Russ (2006) reflected the role of imaginary play in the prevention and decrease of anxiety and distress in both inpatient and outpatient settings. Christiano and Russ (as cited in Russ, 2005) found that children who had high scores on the Affect in Play Scale were able to utilise a greater amount and range of cognitive coping strategies to manage invasive dental procedures. Further support for the influence from imaginary play on emotion regulation arises from the children who attended therapeutic play-groups then self reported a subsequent significant decrease in their hospital fears (Rae, et al., as cited in Russ, 2005). These combined findings support the existence of the relationship between imaginary play and children's development of emotion regulation being transferred to real life situations.

One question that has emerged is how does young children's emotion regulation relate to their ability to differentiate pretence from reality? The cognitive availability hypothesis was put forward by Johnson and Harris (1994) who contended that individual differences result in two groups of children of which availability of memory is the deciding variable. In comparison, Golomb and Galasso (1995)



reinforce Fein's (1989) model of pretence continuation in which children who continue play do so as they are able to regulate their emotions.

Harris, et al., (1991) completed a series of experiments to assess children's ability to discern pretence from reality. In their fourth experiment, young children first confirmed boxes were empty, and then were asked to imagine one box had either a friendly rabbit or a scary monster inside while the remaining box had neutral contents. When the experimenter was out of the room, approximately half of the children still looked in one or both of the boxes, which Harris, et al. attributed to the children being unsure of whether the imagined entities were pretend or real. The children therefore managed their feelings of uncertainty by looking in the box. Uncertainty is thought to be related to worry, which is central to anxiety and therefore important to research further (Dugas, Freeston, & Ladoucer, 1997).

In a comparable study, Johnson and Harris (1994, Expt 3) also found that nearly half of the young children looked inside the boxes in the experimenter's absence. Additionally, the majority of children also directly expressed doubt regarding the pretend-reality status of the box contents. The results lead to Johnson and Harris deducing the two following groups of children:

Credulous children wondered if the imagined entity might be in the box, tested that possibility by opening it, and sometimes evoked magic by way of explanation.

Sceptical children denied that the imagined entity would be in the box, did not check whether it was, and justified their scepticism in terms of ordinary spatial or physical considerations (p. 46).

Golomb and Galasso (1995) renounced the availability hypothesis and further researched young children's ability to distinguish pretence from reality through two experiments involving monsters, bunnies, or children's chosen negative or positive

entities in a box. All of the 75 children were able to discern pretence from reality. The children however, did consistently modify the themes within the pretence to seemingly regulate the intensity of their emotions. Themes were modified to avoid and decrease unpleasant emotions, or to approach and increase positive emotions. Emotion regulation was not however, reliably measured.

In a study by Carrick and Quas (2006), 128 children aged between three and five years were shown illustrations of both pretend and real situations then asked if each image could really happen along with how they felt towards each of them. The children were also rated with the Play Behaviour questionnaire and Pretend Action Tasks. As expected, the older children were more able to discern between pretend and real, however there was no interaction between age and the emotions in the illustrations. A finding of interest was that the emotional valence in the illustrations influenced the children's differentiation between pretend and real situations. For both the pretend and real situations children stated that the neutral and happy events could happen more often than the frightening and angry events, which Carrick and Quas contended was due to the children's attempts to regulate their emotions. That is, the children desired to approach or engage with pleasant emotions, and avoided or retreated from unpleasant emotions.

Bourchier and Davis (2000) completed a series of three experiments designed to examine the effects of emotion and cognitive availability on children (aged 5 to 6 years), and their ability to discern pretence from reality. In the first experiment the children were initially asked to confirm whether three identical, opaque boxes were empty then to pretend each box contained positive, neutral or negative contents respectively. The children then rated the order in which they would open the boxes and then the order that they would throw the boxes away. Most of the children clearly distinguished pretence from reality yet still opened the

boxes in the positive, neutral then negative order, and threw the boxes away in the negative, neutral then positive order, suggesting the children were attempting to decrease or avoid negative emotions and to increase or approach positive emotions.

In the second experiment the boxes were transparent in order to increase cognitive availability by constantly affirming the boxes were empty and therefore the pretence of the contents. Although the children had visual empirical evidence they still significantly responded in the same way as in the first experiment. The children again tried to avoid negative emotions and approach positive emotions.

To further examine the effects from emotions, only two opaque boxes were used in the third experiment. The children were first asked to imagine one box had positive contents while the other box had negative contents then to hypothetically and actually open or throw away both boxes and explain why. Hypothetically and actually, most children opened both boxes, which Bouchier and Davis (2000) attributed to either performance bias or pretence continuation, however the children's explanations reflected beliefs, desires and the intended use of the imaginary contents.

Overall, increased cognitive availability appears to affect the children's pretence beliefs as well as children having individual differences in discerning pretence from reality. Bouchier and Davis (2000) therefore concluded that there might be two complementary subgroups of children; sceptical, in control children who behave in line with pretence continuation, and credulous, unsure children who have behaviour that reflects increased cognitive availability.

When Galyer and Evans (2001) researched the emotion regulation skills of 47 preschool children, they also investigated pretence continuation but in comparison to conflict resolution. The children who were able to continue play when a negatively valenced event was introduced within pretend play had well developed emotion regulation in a wider context. Conflict resolution was not found to be related to the

children's emotion regulation. A positive relationship was also found between the children's social skills and their emotion regulation. Furthermore, the results showed that children's increased frequency of pretend play alone and with caregivers was related to greater emotion regulation skills.

Pretence continuation has therefore often been implicated as an observable behaviour that reflects young children's attempts to regulate their emotions. It also appears however, that some children tend to rely on cognitive availability as an emotion regulation strategy. Bouchier and Davis' (2000) explanation of complementary subgroups of children is an inclusive possibility inviting further exploration.

As noted previously by Galyer and Evans (2001), common aspects of earlier studies that could have been limiting include the lack of reliable emotion regulation measures and naturalist observations. It would therefore be prudent to follow Galyer and Evan's design and specifically evaluate emotion regulation with the Emotion Regulation Checklist and by means of an emotion regulation task within imaginary play in settings familiar to children in order to gather empirical data. While Galyer and Evans did incorporate pretence continuation as one measure of emotion regulation, cognitive availability was not considered. As previous findings by Bouchier and Davis (2000), Harris, et al., (1991) and Johnson and Harris (1994) support, cognitive availability as a form of emotion regulation, investigating both pretence continuation and cognitive availability will provide further information for understanding young children's emotion regulation. Exploring both approaches is compelling due to Bouchier and Davis' claim of their possible complementary nature.