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EMOTION REGULATION: PRESCHOOL CHILDREN DURING OUTDOOR PLAY

Mandira Tiwari

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ABSTRACT

The purpose of this thesis is to help understand preschool children's ability to regulate their emotions through outdoor play. There has been extensive research indicating the positive effects of play on a child's ability to regulate their emotions. Keeping this in mind, the thesis explores preschool children's outdoor play and emotion regulation. The findings suggest that preschool children are able to regulate their emotions through social interaction/play. The observations also help understand the different ways in which children interact with each other when a child expresses negative or positive emotions. The thesis further highlights the importance of play in relation to their understanding of various topics that can often be distressing and, ways in which they navigate their emotions around these topics. Two main themes include the use of risky play to regulate emotions and the expression of emotions regarding the topic of death through play.

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INTRODUCTION

"Just as one can think an idea more quickly and with greater complexity than one can put it into words, one can feel an emotion more quickly and with greater complexity than one can put it into expressive and body reactions" (Holodynski & Friedlmeier, 2011, p.92).

Holodynski & Friedlmeier (2011) compare thoughts to emotions, highlighting the complexity of our emotions as a reaction to events, others, and thoughts. Sometimes it can be difficult for us to understand our own thoughts and emotions, and we wonder what makes us feel negative or positive. Young children might similarly struggle to understand their own thoughts and emotions but, unlike adults, may exhibit more immediate reactions in certain situations (Zimmer-Gembeck & Skinner, 2010). Variations in responsemay be a result of how they process and understand the self and the other. While two or more children may feel the same way and respond in a similar manner, these feelings can depend on multiple factors. Emotion regulation therefore is not something a child is readily equipped with but requires a better understanding of emotions and the introduction of skills that can further help the child express their emotions and regulate them. Social and emotional learning intervention programs are being implemented during school and after school from preschool to high school at various institutions (Humphrey, 2013). There are several types of interventions that are being implemented in preschool programs like Tools of the Mind, PATHS, I can problem solve, and The Incredible Years (Durlak et al., 2017). These programs have been found to be effective in developing student-level social and emotional skills (McLeod et al., 2016).

In this study, I will be exploring preschool children's (ages 5-7) understanding of emotions and emotion regulation, and the importance of play in helping children regulate their emotions, in ways that cannot solely be expressed through speech. I will also describe the ways in which children may express empathy during play. I will then highlight a few instances that demonstrate emotion regulation during play with the help of observations of preschool children engaged in outdoor play, and address common themes found in these observations. This study will also help provide an understanding of the importance of peer interaction in regulating one's emotions.

To understand how preschool children regulate their emotions during outdoor play, I will be providing more information on our understanding of emotion regulation by looking at the different aspects that play a role in determining a child's ability to regulate their emotions. I will then talk about the development of emotions and preschool children's understanding of social emotions. I will then highlight the importance of play in emotion regulation and its importance in the development of empathy.

Emotion Regulation

There are a number of different approaches to defining and explaining emotion regulation. Thompson (1994) describes emotion regulation as "the intrinsic and extrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (p. 27). This definition of emotion regulation describes three steps that help express emotions in relation to one's own goals. Goals can refer to acquiring objects and/or forming relationships with others (peers or adults). For example, some children may tend to avoid expressing certain emotions around adults to avoid punishment, but, at the same time, they may express these emotions with peers where

they no longer fear punishment. Parke and colleagues (1994) believe emotion regulation relates to the ability to control arousal during social interactions and the ability to identify emotional expressions, as well as discern the causes of emotions are of a set of general "affect management skills". Cole et al., (2004) define emotion regulation as systematic changes in activated emotions or in related processes (memory, social interaction, etc.) regardless of the emotion that is activated.

The above definitions help better conceptualize the meaning of emotion regulation and also highlight the importance of perception in the understanding of emotion regulation. Further, they highlight the importance of perspective taking when understanding others' emotions in relation to the self. Thompson (1994) includes the emotional and cognitive aspects of emotion regulation and also includes "one's goals" which can often differ from child to child. Some children may avoid certain behaviors that tend to bring up negative emotions and suppress their emotions as they can be overwhelming. Their goal may relate to avoiding conflict as much as possible. Other children may have goals that are directed towards the development of social relationships. Apart from social interactions, emotion regulation may be important for a child to understand the feelings that come up in different situations within themselves. A preschooler may encounter feelings they have never experienced before due to new interactions they have with peers.

Certain children may have the skills to regulate their emotions based on past experiences, as well as their capability to develop and learn these skills (Thompson, 1994). An important aspect of emotion regulation also includes mentalization, a process that begins to take place atages five to six. Parke and colleagues (1994) introduce a physiological approach by including the term "arousal," which can often relate to cortisol levels in the body. The manner in

which arousal presents itself differs from child to child. It may also take time for a child to understand their feelings (negative, positive) in response to their arousal. For example, as adults, arguments with peers can bring up negative and positive emotions regardless of the outcome. If we base the argument solely on the types of emotions it evokes, it can be harder for us to reach an outcome, further leading to negative peer relationships. It is therefore important to understand the context of the argument and take into account the other person's perspective and the complexity of each situation. This same example, if thought of for a child between the ages of 4-6 years, helps us understand the level of skill and understanding expected of them when all they may require is experience and figuring out what they are feeling. Therefore, it is important to avoid categorizing development into different concrete stages and recognizing that some children may be more advanced at a certain aspect of development while needing more time for a different aspect. One child may react differently from the other, which may be viewed as a certain child having reached a certain stage of development at an earlier or later age. Thus, adults are encouraged to accept the child and let them gain the trust they may need in learning the skills required to regulate their emotions, which can further help them reach certain developmental goals.

Emotion regulation has also been linked to many indicators of children's wellbeing, including social competence and internalizing and externalizing behaviors. Various studies show a link between internalizing behaviors and emotion regulation, often observed as overcontrolled behaviors in which the child is inhibited or rigid (Einsberg et al., 2001). On the other hand, externalizing problems have been associated with undercontrolled emotion regulation styles in which the child is reactive or expressive (Cole et al., 1996). To better understand what emotion regulation is, Thompson (1994) identified various internal and external factors that help better

understand what exactly is being regulated. These factors include neurophysiological constituents, attention processes, construals of emotionally arousing events, encoding of internal emotional cues, and access to coping resources. A more detailed understanding of each factor can be found below.

Neurophysiological constituents

At the biological level, physiological arousal is controlled by the nervous system through the interplay of excitatory and inhibitory mechanisms. In one study, Kagan and his colleagues (1988) found that inhibited children have a lower threshold of reactivity in limbic structures that mediate fear and defense. Emotion regulation is partially based on neurophysiological constituents that develop in the first year and is the basis for further emotion management as the child gets older. As a child begins to understand their own emotions and those of others through internal processes, neurophysiological constituents play an important role in a child's ability to regulate their emotions. Oftentimes, children who are overstimulated by external stimuli have a harder time regulating their emotions due to an oversensitive nervous system. Therefore apart from understanding others and their own emotions, children may focus on regulating the physiological changes that occur internally.

Attention Processes

Another aspect in understanding what is being regulated during emotion regulation includes the attention process, which involves the management of emotionally arousing information (Rothbart et al., 1992). Very early in life, between 3 and 6 months, the child is able to shift their visual attention from one stimulus to another voluntarily, which enables the child to

visually disengage from emotionally arousing events. As children begin to gain a more complex understanding of emotions, they use internal redirection of attention as a way to regulate their emotions (Band & Weisz, 1988). For example, children may choose to focus on pleasant thoughts during distressing situations. Their ability to shift their internal attention from the present external situation can help them better regulate their emotions. As children get older they also begin to take part in different activities in highly arousing situations as a form of distraction (Saarni et al., 1991).

Construals of emotionally arousing events

Children may also regulate their emotions by changing their interpretation of emotionally arousing information. By changing their understanding of reality through certain defense mechanisms like repression, denial, etc., they are able to control the information they process to help them regulate their emotions (Case et al., 1988). Kindergartners are able to substitute their goals in response to negative emotions like sadness or anger that was a result of their original goal (Stein & Trabasso, 1989). For example, children who recognize that their parents may not have time to read them a bedtime story may begin to think that playing a game is as good as their original goal.

Encoding of Internal Emotion Cues

Another aspect of understanding what exactly is being regulated includes nonverbal communication through facial expressions, body posture, and other nonverbal cues, and these cues can be detected and reinterpreted by others in social interactions (Thompson,1994).

Emotional cues can be encoded not only in intentional, conscious behavior but also in automatic,

unconscious processes. For example, facial muscle movement associated with emotional expressions can be triggered automatically and unconsciously even when individuals try to suppress their emotions. Through this, the other can try to figure out how a person is feeling in certain situations. They may not be able to pinpoint what exactly they are feeling, but they can try to understand it as either positive or negative through the automatic responses they observe.

Access to Coping Resources

Emotion regulation can also depend on the availability of external support to manage emotionally arousing situations (McCoy & Masters, 1985). Bowlby and Ainsworth (1991) first spoke about a "secure base" when talking about infant and caregiver attachment. A secure base is initially a caregiver or an adult who provides a consistent and responsive presence to a child. This allows the child to feel safe and supported while they explore their environment. Apart from a caregiver, children may also use a material object like a toy or a blanket they often use to soothe them from distress. These objects can be transition objects which help the child self-soothe during separation from a caregiver. As the child reaches the age of five, they begin to find new resources like friends for their emotional support and understanding. Although they may not be able to communicate their distress in a way that is understandable by their friend, their presence alone can help them feel better during tough situations. They also share positive experiences with their friends either through play or direct communication. By the time a child reaches the age of six, they are aware that emotion displays can be altered to mislead onlookers about the quality and intensity of their distress (Thompson, 1994). It is therefore important to understand children's understanding of social emotions and how they view others' and their own emotions.

Children's understanding of social emotions

Adapted from Vygotsky's theory of inter to intra psychological functioning (Vygotsky, 1997), Holodynski developed the internalization model of emotional development to explain the process of transformation from the biological emotional reactions of a newborn to a system of higher psychological emotions through expression signs (Holodynski & Seeger, 2019). Expression signs relate to the nonverbal aspects like body language and facial expressions that are often associated with certain emotions.

In this model, emotion is defined as "a functional psychological system involving the synchronic interplay of several components that serve to initiate and regulate a person's action" (Holodynski & Seeger, 2019, p.1813), while feeling as a component of emotion is the consciousness of the experienced sensations and emotional reactions. Therefore, children's emotion regulation development in this model emphasizes the shift from using emotional expressions inter-psychologically towards intra-psychological regulation, where consciousness of one's own emotions are the core (Holodynski & Friedlmeier, 2011). Moreover, three phases, based on children's biological age and shift in sign use, were identified in this model to explain the course of emotion regulation development in children, that is, expression as communicative signs for coregulation, emergence of self-regulation, and finally, internalization of sign use and appearance of emotional processing (Holodynski & Seeger, 2019).

A common way for a neurotypical adult to distinguish emotions is through emotion scripts. Each emotion has a script, which includes an eliciting event, conscious feeling, facial expression, vocalization, action, physiological manifestation, label, etc. When adults attempt to identify an emotion within themselves or others, they try to categorize them through different scripts. According to a few studies, children starting from the first year have categories and ideas relating to an emotion (Holodynski & Friedlmeier, 2011). They try to connect different facial

expressions to different emotions. Therefore, a certain expression can then help them automatically signal a certain emotion.

Young children begin to form scripts by including different events and consequences in relation to a certain emotion (Holodynski & Friedlmeier, 2011). Children begin with a broad understanding of emotions and as they get older they have a better understanding of various emotions. They initially begin their understanding of emotions in the form of two categories, namely pleasure and displeasure. This can be categorized through how something makes them feel, for example if they get what they want they feel happy and if they do not, they feel bad. Although the adults around them can also influence their understanding of emotions through visual cues, children's initial understanding begins through the self. Therefore, a child may also connect displeasure with facial expressions like downcast eyes, downturned mouth, and tears. The child can also relate displeasure with knitted eyebrows, clenched jaw, and added verbal communication of yelling or frustration. The child will then create categories under displeasure and include anger and sadness as two separate categories (Du & Martinez, 2013). Now that the child is able to recognize and differentiate facial expressions they begin to include different situations in relation to the facial expressions they evoke. Therefore, they can now gain a better understanding of emotions through facial expression. As they begin to form emotion scripts, they depend on facial expressions to combine various information in relation to a certain emotion.

By the time the child is in preschool, they begin to depend on various factors to identify an emotion (Widen & Russell, 2010). They may depend on the cause, consequence or emotional label to identify an emotion. Since this is the time children are beginning to understand fear and disgust, studies indicate they find it harder to identify these emotions through facial expressions. They now rely on cause, consequences and emotion labels to identify these emotions.

Pons and colleagues (2004) also believe there is a relationship between language development and emotion recognition. Children between the ages of three and eleven show a correlation between their grammar and emotional understanding. A study by Widen and Russell (2010) also found children depend more heavily on cause and consequence when identifying social emotions like fear and disgust.

During infancy, children begin understanding social emotions through expressions. As they reach the ages of five or six, children observe the events that occurred before an emotion was expressed and how the other reacted to the child expressing a certain emotion. Therefore, they find commonalities in behavior for each emotion expressed (cause), and the consequences relate to what happens after the emotion is expressed. They are now able to predict how one reacts to an emotion and therefore they begin to control how they express certain emotions. This helps us understand why experience plays an important role in a child's understanding of emotions. To better understand social emotions, children would need to encounter more events that demonstrate these emotions to help place them in the appropriate scripts. This also highlights the importance of peer interaction in the understanding of emotions.

From the above models, we can infer that children begin to recognize emotions through the self. As children develop, their understanding of emotions expands, making it easier for them to recognize the same emotions they recognize in themselves through others. They also begin to recognize new emotions and categorize them according to the information they have. Since children in preschool are able to recognize others' emotions, it is then important to look at how they react to their peer's emotions through social interaction, which can be observed during play.

Play and Emotion Regulation

Pretend play and structured games with rules have been used in therapy to help children explore and express their emotional and social difficulties, promote self regulation, and help the child develop a sense of control (Landreth, 2023). Vygotsky (1997) highlighted the importance of pretend play and the ways in which it helps children gain a sense of control. During pretend play, the child may hold a stick that can give it a new meaning; for example, a stick can be a wand or a baby and the child will then create a set of rules around this new meaning they give the object. By doing so, the child is not obligated to play with the objects present in their environment and use the literal meaning to play with these objects which come with preset rules. This changes the child's behavior from impulsive or immediate to controlled and voluntary. The use of pretend play is also a way for children to remove themselves from their immediate environment (Landreth, 2023). Another form of pretend play includes role taking. In these situations, children devise their own actions characteristic to the role they are playing. This form of play also allows for perspective taking, and the child begins to see their environment through the role they are playing. Perspective taking is very important for children's understanding of emotions and positive social interactions. Role playing also helps the child distance themselves from their own emotions, which can further help them regulate their emotions by observing the self from a different perspective.

Empathy and Play

Empathy is an emotion that is often considered a crucial aspect of social and emotional development among preschool children. Empathy can be defined as the ability to understand and share the feelings of others (Hoffman, 2001). It is an essential skill that allows preschool children to establish meaningful relationships with others, understand the needs and emotions of others, and develop prosocial behaviors (Eisenberg et al., 1998). The development of empathy among

preschool children can be divided into two stages: the emergence of empathy and the consolidation of empathy (Zahn-Waxler et al., 1992). The emergence of empathy occurs in the first year of life when infants begin to display signs of emotional contagion, which involves mimicking the emotions of others (Zahn-Waxler et al., 1992). For example, if a baby sees another baby crying, they may also start to cry. This behavior indicates that the infant is able to recognize and respond to the emotions of others, which is the first step towards developing empathy. The consolidation of empathy occurs between the ages of 2 and 6 years when preschool children begin to develop more complex forms of empathy (Eisenberg & Fabes, 1998). At this stage, preschool children begin to understand that others have thoughts, feelings, and beliefs that may differ from their own (Hoffman, 2001). They also begin to exhibit prosocial behaviors such as helping, sharing, and comforting others (Eisenberg & Fabes, 1998).

Research has shown that several factors influence the development of empathy among preschool children. Research shows one factor that influences the development of empathy among preschool children is exposure to diverse social environments (Eisenberg & Fabes, 1998). Preschool children who interact with a diverse range of people, including those from different ethnic, cultural, and socioeconomic backgrounds, are more likely to develop empathy towards others (Eisenberg & Fabes, 1998). Research has also shown that children who are exposed to media that portrays prosocial behaviors, such as sharing and helping, are more likely to develop empathy towards others (Gentile & Bushman, 2012). For example, one study found that preschool children who watched a television show that portrayed characters engaging in prosocial behaviors were more likely to exhibit those same behaviors themselves (Gentile & Bushman, 2012).

Play provides opportunities for children to practice perspective-taking, which is a crucial component of empathy. Perspective-taking involves the ability to understand and take into account the perspectives and feelings of others (Pellegrini & Smith, 1998). During play, children engage in activities that require them to take on different roles and perspectives, which can help them develop their perspective-taking skills and become more empathetic towards others (Pellegrini & Smith, 1998). Moreover, play can help children learn to regulate their emotions, which is important for the development of empathy. Through play, children learn to express and manage their own emotions, as well as recognize and respond appropriately to the emotions of others (Pellegrini & Smith, 1998). For example, during play, children may experience emotions such as frustration, disappointment, or joy, and they learn to express these emotions in socially appropriate ways (Pellegrini & Smith, 1998). Play can also promote the development of social skills such as cooperation and sharing, which are important for the development of empathy. During play, children learn to work together towards common goals and share materials and toys, which can help them develop a sense of fairness and empathy towards others (Pellegrini & Smith, 1998). Moreover, research has found that play interventions can be effective in promoting empathy among preschool children. One study found that a play-based intervention aimed at promoting social and emotional competence in preschool children resulted in significant increases in children's empathy towards others (Roberts et al., 2014). The intervention involved the use of games and activities that encouraged children to practice perspective-taking, express and manage their emotions, and engage in cooperative play.

In this study, I will be observing everyday situations during outdoor play that better help understand what strategies children ages 5 to 7 may use to regulate their emotions and the ways in which they react to their peers in distress. Thirteen children ages (4-7) were observed for 1

hour each over the course of 14 days and 5 weeks during outdoor play at a progressive preschool. The above information helps us understand how children understand emotions, and how they express emotions through play and the development of empathy. Extensive emphasis is placed on the importance of parent or adult intervention in helping children regulate their emotions. While it is important for adults to help children better understand their internal and external world, this study highlights the importance of peer interaction through play in letting children gain a more complex understanding of their own emotions and those of others, which further helps children regulate their emotions during positive and negative situations. Through this study I expect to see a high percentage of negative emotions resolved within the group through peer interaction/play. I also expect to see the presence of prosocial behavior and positive emotions during play. Since the recording of observations will mostly begin when a negative emotion is expressed, I expect to see an overall higher percentage of negative emotions in the observations.

METHODS

Participants

Participants included students in the 5s, 6s, and 7s class at an early childhood center laboratory school in southern Westchester county, New York. This early childhood center (henceforth, ECC) follows a progressive curriculum by placing an emphasis on the emotional and social development of the children presently enrolled. Most students I observed belonged to the 5s, 6s, and 7s class, while some observations also included students from the 4s and 5s class. The two classes are located opposite each other in the same building and share the same yard for outdoor time.

Procedure

My observations took place during outdoor time at the ECC. Outdoor time for the 5s, 6s, and 7s class is split into two 30-minute sessions during the day, one before lunch and the other right before the children go home. I specifically observed the children during outdoor time because this is when a wide range of play occurs. The types of play observed have previously been used as methods to help children better regulate their emotions during play therapy. The children also have significantly more space outdoors compared to the indoors play areas, which gives them the opportunity to use different areas for different games or different forms of play. For example, in yards that are packed with equipment, children tend to use the slide or the jungle gym to perform activities specific to those pieces of equipment. On the other hand, playgrounds with free space gives the children the ability to engage in pretend play, rough play, and also gives them the opportunity to choose how they wish to use the outdoor time given to them (Stephenson, 2002). This in itself is a way for children to begin exploring the self and better understand those around them by sharing their play with the rest of the children. Children are more curious during outdoor play and tend to devise rules and goals based on their surroundings (White, 2008). A certain object can be used for multiple purposes depending on the child's perception of it. This helps children to create diverse play experiences.

During outdoor play at the ECC, children are allowed to express themselves in ways they feel most comfortable without objections from a teacher. The children are allowed to take part in any form of play unless it may cause harm to another child. The children are encouraged to keep in my mind the other children's emotions during different types of play. The children are also encouraged to voice their opinions or objections when they aren't comfortable during different situations.

The observations took place twice a day for a total of an hour over the course of 5 weeks resulting in 31 distinct observations. I have used pseudonyms for each child, making them unidentifiable by those who read the observations. I divided the playground into 4 sections: (1) behind the tree; (2) the slope area; (3) the rock area, and (4) the playset area to better understand the type of play that occurs in different areas of the playground. I began an observation when a child expressed themselves in a loud tone or when there was a shift in expression to positive or negative. This may have resulted in noting observations that involved the child being more expressive and fewer observations including disinterest in activities or lesser involvement with other children. My observations include the child expressing this emotion and other children interacting with the child.

In my observation book, I split the observation section into verbalization and actions that occurred during the event, and once outdoor time was done I would go back and write a more detailed observation including specific words or actions that can help the reader better visualize the event. This way, it is easier to associate certain actions with certain words that were used in each situation. This also helps with the flow of events that occurred. Once I was done writing down my observation, I used a checklist to code the emotions of the child in a new document. As I was unable to observe all the children at the same time the codes do not represent the class as a whole but more specifically only represent the children included in my observations. Therefore, the codes cannot be used to deduce the percentage of children who regulate their emotions at the ECC, but rather the ways in which the children express their emotions and further, the ways in which they regulate these emotions during peer interaction.

For coding the observations, I used the Minnesota Preschool Affect

Checklist-Revised/shortened (Denham & Couchoud, 1991). This checklist has previously been

used by teachers and caregivers to document a child's emotional development. The interactions are often associated with a level of intensity using numbers to specify how intensely a child expressed an emotion. I did not include the intensity of the emotion expressed as I was only looking at ways in which the children regulate their emotions and further understanding the strategies they use. Once I recorded the observations and provided a code for each of the events, I began to look at common themes that occurred during observations. These themes specifically relate to how play can help children regulate their emotions in a more long-term manner and not specifically at one given moment.

More information about the checklist can be found in Appendix A. The checklist mainly looks at negative emotions, prosocial behaviors, positive emotions, and whether a child was involved during a particular activity. The negative emotions mainly include the physical display of negative emotions through facial, vocal or bodily emotion. It also includes when a child directs their emotions towards a particular child. The display of the emotion must also be context related; for example, a child may react with a negative emotion to another child's behavior. This includes the display of negative emotion through verbal or physical aggression. The prosocial category involves events that include the children regulating their emotions through cooperation, taking turns, or sharing objets. The positive emotion category mainly includes instances in which the child demonstrates positive emotions through verbalization or expression. Positive emotions can be expressed as a reaction to another child and they can also be shared.

RESULTS

The results from the observations include several instances in which the children displayed negative emotions, positive emotions, and prosocial behavior.

Table 1 includes a few examples of how the observations were coded using the Minnesota Checklist.

Table 2 includes a few observations demonstrating prosocial behavior. These behaviors include cooperating, sharing and turn taking. Prosocial behavior is associated with a greater ability to regulate one's emotions.

Table 3 includes the total number of observations that demonstrate negative emotions, positive emotions and prosocial behavior. It also includes the percentage of negative emotions, positive emotions and prosocial behaviors. Further, Table 3 displays the percentage of negative emotions that were resolved through peer interaction/play and the percentage of negative emotions that required teacher intervention. Overall I found that most of the negative emotions expressed were resolved within the observational period of thirty minutes. These emotions were resolved predominantly within the peer group without the involvement of an adult. Some instances also include situations in which the child resolved their own negative emotions by spending time with themselves, which is without the involvement of their peers.

After coding for the emotions expressed, I began looking at common themes that occurred which may play a factor in long term emotion regulation. The topic of death was brought up several times throughout the observational period. These observations are present in Table 4. The topic of risky play coincided with the death and play, therefore Table 4 includes observations that highlight both these topics. Table 5 includes an observation demonstrating empathy towards a peer and one observation demonstrating empathy towards a teacher.

Table 1 Coding

Table 1 includes shorter versions of the observations with key verbal and nonverbal elements that are easier to understand the emotion that was expressed. It also includes the area where each

event took place mainly to check if certain emotions were expressed more frequently at a certain area and the type of play observed. The date helps us understand if there were certain themes that occurred for longer periods of time. For example, the topic of death was a recurring theme throughout the observational period. The checklist column helps identify the emotions that occurred in that particular situation and if there were any changes in the emotions expressed during that observational period.

Date	Area	Checklist	Event
02/08	Tree	Positive emotion Prosocial (cooperating)	Bouncing on the tree branches; "Help! Help! I am going to die because it's so high!" Laughing "AHHHHH!"
02/08	Near the playset outside the box	Negative emotion; quickly resolved; Response to an arousing situation.	Stick is pulled out of hand; runs across the ground to the sandbox, begins throwing sand on the previous child. Teacher intervention. Quickly begin playing with each other
02/09	multiple	focused;	Leaves detached from different types of tree branches; presents multiple objects across the 30 minute time period.
02/10	Near the playset	Positive reaction to emotionally arousing situation	Falls and turns around to look at the teachers. Given the space to express her emotions naturally
02/10	Near the trees	Productive	Sit digging the entire half an hour, goes inside to get boots and comes back to

			dig.
02/13	Table near trees	Negative emotion; spends time alone after expressing negative emotion	Knocks down blocks when asked to hang backpack; looks at Teacher occasionally while knocking down the blocks; teacher walks towards him and he goes with the teacher to hang the bag. Goes back to the table and knocks down the rest of the blocks. Goes to the top of the slide and sits there for a few minutes. Goes back down.
02/14	trees	Leading and joining Positive emotion	Pushing the tree branches down like CPR. "CPR! CPR!"(A) Laughing while sitting on the branch. "We're going to die!" (B) "goodbye everyone see you in heaven"
02/14	play set	Prosocial; cooperative	"Goodbye world!" (A) jumping off the top of the slide. (B) "Let's die together!" "I need to die first, I was here first!" Jumps. W jumps and lays on the ground for a few minutes. C and D join. (C) "It's a game to the future" (B) "What's the time difference there?" D singing "Kill yourself! Kill yourself! "Kill yourself!" (B) "I keep killing my hand!"

Observation 4 in the above table highlights an incident in which a child responds to an arousing situation with positive emotions. The child while running up the hill falls to the ground infront of three teachers. She then looks at all the teachers and says "Ouch". She goes on to repeatedly look at the teachers as she continues to say "Ouch" a few more times. The teachers look at her in a

concerned manner but do not express extreme emotions that can mislead the child to feel a certain way which may not necessarily be how she is really feeling in that situation. She later gets up and goes on to play with her friend.

Observation 6 in the above table in contrast to Observation 4 highlights an instance requiring teacher intervention. In this observation two children are asked to hang their backpacks while one of them runs up to hang his backpack the other is standing next to a table that has a structure on it and begins to push the blocks. Occasionally looking at the teacher as she continues to ask him to hang his backpack. In this situation, the teacher walks towards him and walks back with him. He then knocks over the rest of the blocks and goes on to sit at the top of the playset. This observation highlights withdrawal after the expression of a negative emotion.

Table 2: Prosocial behavior

Table two highlights two observations demonstrating prosocial behavior which includes cooperation and sharing.

Action	Verbalization
B and E get off the rock. Q and T are on the other side of the yard and go running towards the rock. They climb the rock and stand on it. E comes running back to the rock. E runs towards B and begins talking to him. Q and T continue to sit on the rock for a little longer.	Q "We got the house!" E "That's not your house!" Q "It's ours now!"
H sits on the ground digging with a plastic shovel. Keeps digging for a long time. D joins her and begins digging with another plastic shovel. H runs to go inside and D follows behind her but stops outside the door. D begins walking around. H comes back outside with boots on. H and D come back to the hole and begin digging again. H gets some soil from a different area	

Puts the soil from the shovel into the hole and	
begins digging again.	H "Do it like this. The soft soil helps the crunchy
Time to go home!	soil!"

The first observation in the above table demonstrates prosocial behavior, where the two children cooperate with each other while acquiring the same goal. The rock at the playground was occupied by four children and two other children tried to climb on it but were unable to. In this observation the same two children further go on to climb the rock when the other four children have left.

Table 3 Positive emotions, Negative Emotions and Prosocial behavior

Table 3 includes the total number of observations that show positive emotions, negative emotions and prosocial behavior. Two of the observations could not be categorized under the three categories. The table also includes the percentage of observations demonstrating the two emotions and prosocial behavior. It further shows the percentage of observations (negative emotions) that required teacher intervention and the percentage of observations (negative emotion) that were resolved through peer interaction/play.

	Positive	Negative	Prosocial
Total	6	14	9
Percentage	18.75%	43.75%	28.12%
Percentage of negative emotions resolved through peer interaction/play		57.14%	/
Percentage of negative emotions requiring teacher intervention	/	14.3%	/

Table 4: Play and Death/Risky Play

Table 4 includes the observations involving the topic of death and the conversations and type of play that occurred.

Action	Verbalization
H, D, E and B are sitting on the tree with their legs hanging off of the branch. D is sitting on a branch that is quite low compared to where the rest of them are seated. D begins pushing the branch and it moves up and down with him on it.	D "CPR! CPR!" While D is moving the lower branch up and down H "we're going to die!"
All four of them swiftly get off of the tree and move to the playset. They walk towards the other side which has the ladder. E jumps off of the ladder area and lays on the ground. B who has been standing behind him at the top	E while sitting on the playset "I'm going to kill myself!" Says so laughing E "Goodbye world! See you in heaven!"
repeats what E just did. They both lay on the ground for a few minutes and get up again. They continue enacting the same scenario a couple of times. H and D join them. While B and E lay on the ground, H does the same B goes back on top and jumps again landing on his arm.	H "It's a game to the future!" B "What's the time difference there?" H and D begin singing "Kill yourself! Kill yourself!" B "I keep killing my arm!"
They all move out of that area and go to different part of the ground.	
H,E,D,B sitting on the big rock. H and D are sitting lower than B and E. B slips and is grabbing on to the top of the rock. B climbs back on the rock and sits next to E. Q tries to climb the rock. Q continues trying to climb the rock and slips.	B "This is our house!" B "I'm trying to get on this! B "This is our house. Get out of our house!"
B begins to slip again	O (AMI 1:1 1:1 0)
H gets off the rock picks up a shovel and begin digging the ground. She then places the mud on the rock.	Q "Why did you kick me?" E "We didn't kick you" B "I'm falling, I don't know if I'm going to die!" H "If you die I'll kiss you!" B "Kiss me?" shocked E "EW!" B "H! Stop! We don't eat poop" E "Stop giving us poop!"

H stops placing the mud on the rock. She then stands next to the rock.	B "We are not homeless. We don't eat poop!"
While most children are dancing B and E come to the slide area and climb up. B jumps and lands on the wood chips. E jumps off and runs towards B and begins pushing his body towards the ground with both his palms.	B "Look! I am going to die!" B while laying on the ground "OUCH!" E "Sorry I think I went too far!" Teacher "What happened?" B "Nothing."
B gets up and walks away with his eyebrows knit while touching the part E was pushing. E walks towards B but is standing at a distance while watching him. B sits on the bench for a while and E walks away. The children were eating lunch outside and E and B sat next to each other and ate their lunch while talking to each other.	
H begins climbing the tree. B,E, and D climb the tree as well. They climb up pretty quick which makes it look like they have done it before. They each sit on different sides and H and D sit at a lower branch than B and E. D sitting on the tree and laughing. E and B looking at H and laughing.	D "AHHHHHHH!' Laughing H "I am going to die because it's so high!" In a volume that can be heard throughout that area of the ground. H "We need help!" Smiling and laughing while saying this. "Help! Help me!" (H) looking at the rest of the kids on the tree. E "I am going to save her!" But doesn't move from the area he is seated at.

The first observation in the above table demonstrates a situation where a group of children are sitting on a tree and one of them is sitting on a branch pushing it to go up and down while at the same time saying "CPR! CPR". The child in this situation expresses positive emotions as he is laughing while saying the above. Further the children move from the tree to the playset where they begin jumping from the playset while saying they are going to kill themselves and laughing at the same time. They even go on to sing "Kill yourself! Kill yourself!". They then describe the game as a game to the. The children while expressing positive emotions are at the same time

cooperating and taking turns while jumping from the playset. They are sharing their emotions with each other through play while also taking part in prosocial behavior.

Table 5: Play and Empathy

Table 5 includes an interaction between two children and an adult demonstrating empathy through verbal communication.

Action	Verbalization
Q digging with a pan in the same motion as one would use a shovel. Q then takes another pan with holes in the bottom and flattens out the area moving the pan back and forth. The mud is entering the pan through the holes and Q looks at it and continues moving the pan back and forth. H comes running and places a bucket full of white sand next to Q. Q places the white sand in the pan and moves it around while the sand falls through the holes.	H "Here's some ice!" Q "oh"
Continues digging with the pan. H comes running with her hands full. H places wood shavings on the ground. H then runs away. I move to the bench. Q comes towards the bench and begins constructing a structure with the hollow blocks that are available outside. H comes running and watches Q. Q points to the tip of his tongue. Q has made a structure that looks like a tower with the hollow ends vertical towards the top. He begins to pour sand through the hole. He then lifts up the block and sees the sand is on the block that he had placed horizontally. Q runs to get more sand. Time to go home.	Q "Are you upset? Tired? Frustrated?" Me "No, I am just a little cold" Q "Have you ever gotten a frostbite?" Me "No I don't think I have." Q "I had one here once! Haha! H "Here's some sprinkles" Me "It's really cold today!" H "I am cold too. I am more cold because I am a child!" H "What is he making?" Me "I am not sure. You'll have to ask him." Q "wow! That's cool!"
While most children are dancing B and E come to the slide area and climb up. B jumps and lands on the wood chips. E jumps off and runs towards B and begins pushing his body towards the ground with both his palms.	B "Look! I am going to die!" B while laying on the ground "OUCH!" E "Sorry I think I went too far!" Teacher "What happened?" B "Nothing."

B gets up and walks away with his eyebrows knit while touching the part E was pushing. E walks towards B but is standing at a distance while watching him.

B sits on the bench for a while and E walks away.

The children were eating lunch outside and E and B sat next to each other and ate their lunch while talking to each other.

The first observation in the above table demonstrates a situation where a child uses verbal communication to express his concern regarding the well being of the teacher. The teacher didn't previously talk to the child regarding their feelings. This demonstrates the child's ability to read nonverbal cues which include body language, facial expression and tone of voice. He further chooses to express his concern demonstrating empathy towards the other.

The tables above help recognize the types of emotions displayed during outdoor play and common themes of death and play, and risky play. The percentage of negative emotions displayed was the greatest when compared to positive emotions and prosocial behaviors. More than half of the observations involving negative emotions were resolved through peer interaction or play. For example, in one of the observations a child is holding on to another child by wrapping her arms around him. There are a few children around them that tell her to let him go but she continues to hold on to him. The child being held then tells the child to let him go and she quickly removes her arms from around him. They all continue to move on to another game. The children were able to recognize each other's emotions outside of the game. Therefore they were aware of emotions that were expressed during pretend play and those that were expressed out of it.

A small percentage of the observations also required teacher intervention. In the rest of the observations demonstrating the display of negative emotions, it is unclear if these emotions were resolved. For example, an observation in Table 1 demonstrates negative emotions when the child is asked to hang his backpack. It is unclear if his negative emotions were resolved after he spent time alone. Although he does later go on and play with another child, there wasn't a clear understanding of how he resolved his negative emotions.

Both risky play and the theme of death and play coincide with each other. It can be inferred that most of the risky play involved during the observation period related to heights. This is displayed through climbing a rock, a tree and jumping from the play set. Two examples of empathy during play are demonstrated towards a teacher and a child.

DISCUSSION

The present study was conducted to better understand ways in which children regulate their emotions during outdoor play. The Minnesota Preschool Affect Checklist Revised (Denham et al., 2012) was used to code the emotions expressed and the behaviors that occurred before and after. Prosocial behavior occurred in 28% of the observations. These observations solely demonstrate prosocial behavior without the display of negative affect before the behavior. Prosocial behavior has been shown to positively affect a child's ability to regulate their emotions. Table one includes the total positive emotions, negative emotions and prosocial behaviors.

Table 1 includes some observations with the coding for each observation. It includes both positive and negative emotions and the area in which the events occurred. Detailed descriptions can be found in Appendix 2. Overall, the children were able to regulate their emotions within the same observation period. 14.3 % of observations required teacher intervention when a negative

emotion was displayed. Whereas, 57.14% of the observations demonstrating negative emotions were resolved within the group through peer interaction/play further highlighting the importance of play in emotion regulation. Since the ECC places an emphasis on social and emotional development, the children have previously been introduced to recognizing their peer's emotions in reaction to their behavior. This can play a very important role in the children's ability to regulate their emotions. Keeping this in mind, it can also be seen that most children resolve negative emotions within the group through verbal communication, nonverbal communication. The theme of death was brought up several times during the observation period as seen in Table 4. The theme of death and risky play often coincided with each other. The relationship between these themes and emotion regulation can be found later on in the paper. Lastly, Play has also been found to have a positive impact on preschool children's development of empathy. Table 5 includes examples of empathy found in the observations. Further highlighting preschool children's ability to demonstrate empathy through verbal and nonverbal communication.

Prosocial Behavior and Emotion Regulation

Prosocial behavior during outdoor play involves actions such as sharing, cooperating, and helping others. These behaviors are important for building positive relationships with peers and developing social skills (Eisenberg & Fabes, 1998). Prosocial behavior during outdoor play can also help children regulate their emotions. Research has shown that engaging in prosocial behavior can have a positive impact on children's emotional regulation. For example, a study by Michalik and colleagues (2007) found that children who engaged in more prosocial behavior during free play showed better emotion regulation skills, such as less negative affect and more positive affect. The study also found that children who engaged in more prosocial behavior showed greater social competence and were more well-liked by their peers. Furthermore,

prosocial behavior can help children cope with stress and negative emotions during outdoor play. In addition, emotion regulation can also facilitate prosocial behavior during outdoor play. Children who are able to regulate their emotions are better able to control impulsive behaviors and respond in a more prosocial manner. For example, a child who is able to regulate their frustration when waiting their turn in a game is more likely to share and cooperate with others during the game. In conclusion, prosocial behavior and emotion regulation are interconnected during outdoor play. Engaging in prosocial behavior can help children regulate their emotions and cope with stress, while emotion regulation can facilitate prosocial behavior. However, there are also challenges to emotion regulation and prosocial behavior during outdoor play, and it is important for adults to provide guidance and support to help children develop these skills. By fostering prosocial behavior and emotion regulation during outdoor play, adults can help children build positive relationships with peers, develop social skills, and cope with stress and negative emotions.

Children's understanding of death through play

A common theme seen in some of the observations is the talk about death or the reenactment of death. While this is a topic that is not done much research on, through conversations with peers and adults who have previously observed preschool children, the topic of death is something that is commonly explored through play. According to Bowlby (1969), children under the age of 2 may not have any understanding of death as this is when they still haven't developed a concept of permanence or object constancy. Winnicott (1967) described object constancy as the child's ability to view the primary caregiver as a separate individual. Further, it relates to the understanding of the caregiver existing outside of their own needs and desires. Winnicott also believed that the ability to maintain a sense of connection and emotional

security during separation is important for the development of a healthy relationship. Those who struggle with object constancy may have a harder time forming and maintaining close relationships. Therefore without the development of or an understanding of object constancy it is much harder for a child to understand what death means.

As children reach the ages of six and seven, they begin to better understand what death means in relation to the finality aspect of it. That is, they begin to understand that death may mean that there is no returning of the being that has died. A study by Slaughter & Griffiths (2007) looked at fear relating to death among children between the ages of 3 and 7 years old. The older children recognized death as a permanent and irreversible state. The study also found the older children feared the unknown more than the younger children. As seen in Table 4, the children tend to express positive emotions while talking about death and are also laughing in some of these instances. One observation also includes a child "rescuing" another child by trying to bring them back to life.

We can also see that at one instance the children reenact this several times where they each keep jumping from the playset. This can be seen as a form of cooperative play as one is depending on the other in this form of pretend play and they both are sharing their feelings about it together in the form of play. Cooperative play and sharing are both seen as a part of prosocial behavior which helps in the development of empathy. By taking part in this form of play they are not only trying to understand the concept of death but are also developing an understanding of different forms of emotion through prosocial behavior. Play is widely used in therapy for children to overcome negative emotions towards a certain topic. In these instances the child reenacts what is causing them distress and changes the story by gaining control over it. In the observations it can be seen that the children bring up the topic of death several times and never

express negative emotions towards the topic. In one observation the children are taking turns to jump from the playset while claiming they are going to kill themselves, they then stay still in the position they landed on the ground and then continue this a few more times. In another example one child says she will kiss one of them if they die, which helps us understand that she may have gained this understanding through a movie. This can be confusing when children are trying to understand the concept of death in regards to it being reversible. They may understand that it is reversible through what they have seen in the media.

Risky Play

Risky play is a type of play that involves an element of risk or uncertainty, such as climbing trees, jumping from heights, or exploring new environments. While risky play is often associated with potential dangers, recent research has shown that it can have numerous benefits, especially for children. One of the key areas where risky play has been found to be beneficial is in emotion regulation. Risky play has been found to have numerous benefits for children's emotional development. According to Brussoni et al. (2012), risky play can help children learn to regulate their emotions by providing opportunities for them to experience a range of emotions and learn to manage them effectively. For example, when children engage in risky play, they may experience fear, excitement, and a sense of accomplishment. These emotions can help them learn to regulate their emotional responses to different situations and build resilience. Another way in which risky play can benefit emotion regulation is by providing opportunities for children to learn self-control. According to Sandseter (2007), risky play can help children learn to control their impulses and make informed decisions about risks. By engaging in risky play, children learn to assess risks and take calculated risks, which can help them develop self-control and decision-making skills.

Risky play can also benefit emotional development by providing opportunities for children to develop social and emotional competence. A study by Sandseter (2007) found that children who engaged in risky play were better able to regulate their emotions than those who did not. The study also found that children who engaged in risky play were more likely to take calculated risks and make informed decisions. Similarly, a study by Little and Wyver (2008) found that children who engaged in risky play had better emotional regulation skills than those who did not. The study also found that children who engaged in risky play were more likely to show positive emotional responses to challenging situations. This can relate to the observations demonstrating risky play as they often were associated with positive emotions. One example includes the observation in which a child climbs up the tree and begins to scream "Help!" while laughing and looking around. The child is aware of the risks associated with climbing a tree but expresses positive emotions during play. He is aware of the environment he is in, which encourages him to explore and process his emotions in different situations.

Through the observations, it can be understood that children at the ECC were also engaging in certain types of play that were specific to a certain area in the playground. For example, most children used the tree to take part in risky play where they were aware that teachers would interfere when required. Children may be testing their boundaries and recognising that the teacher is available to help them when required. This makes it easier for them to explore their natural environment. This also creates a safe environment for the children by helping them understand the level of support available to them without explicitly stating rules and limiting their ability to explore their environment through play. Minimal intervention from the teachers also helps problem solving among the children when possible which is also demonstrated in several observations.

ECC and Emotion Regulation

As the ECC gives a lot of importance to the social and emotional development of preschool children, it creates an environment in which children are more comfortable expressing their emotions and processing them. As one of the major themes was that of death and play, it can be said that the children who took part in this form of play displayed higher levels of social intelligence than the others. To be able to pretend like one is dead they must take the perspective of the other. By doing so the child recognizes the emotions that are specific to that particular topic and processes these emotions by putting themselves in the others' situation. The ECC also creates a welcoming environment where the children are not stopped from talking about certain topics that may seem alarming to some adults. Further, children between ages five and seven may also be exposed to the idea of death through movies or TV shows making them curious about what it means. With the added element of children not being able to talk about death in most environments, the ECC plays a vital role in helping children express those curiosites and process them. As seen in the section talking about play and emotion regulation, it has been found that children automatically gravitate towards play when dealing with topics that are emotionally challenging to them. Repeated play of the same topic is also used as a way for children to shift their negative emotions towards a topic into something more positive. Apart from processing their emotions, the ability to go through this process can be a very freeing experience. The level of independence provided to the children at the ECC can help them explore their environment further by experiencing new ideas and topics with peers without the intervention of an adult.

LIMITATIONS AND FUTURE DIRECTIONS

Having two people note down the observations can help add more detail to the observations and demonstrate each observation with more added specificity. Although the main emotions expressed were understood through the observations, including more nonverbal aspects like body language and facial expressions can help gain a more clear understanding of each event.

Including the intensity of the emotion expressed and time taken to regulate emotions can help in relation to intervention strategies for teachers and caregivers. Observations looking at a smaller number of children for a longer period of time can be helpful in relating the child's temperament and their ability to regulate their emotions during outdoor play. Future studies including information regarding the home environment can be helpful in identifying the children's ability to regulate their emotions. Lastly, studies looking at emotional intelligence, emotion regulation and type of play can help form a better understanding of how they relate to each other.

CONCLUSION

This study helps demonstrate the importance of play in helping preschool children regulate their emotions. The observations also highlight that preschool children have an advanced understanding of their own emotions and those of others. The children were able to share their understanding of various topics through play and also process their emotions regarding these topics together. As expected, the children were able to regulate their emotions through peer interaction the majority of the time when a negative emotion was expressed. The ECC helps create an environment that promotes the development of a complex understanding of emotions and also promotes the use of play in helping children express their emotions in various ways. The outdoor environment at the ECC helps the children take part in a pretend play for a majority of their outdoor time, where they make their own decisions regarding the type of play

they want to take part in and also create their own rules in regards to play. The ECC also provides a safe physical environment where the children can explore their natural environment while being aware that they will be assisted/helped when required. By stating children's emotions during distressing times the teachers highlight the emotions expressed by all children, helping them recognize emotions in others and therefore helping them process their understanding of these emotions.

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APPENDICES

Appendix A

Emotionally Negative/Aggressive

NEGATIVE EMOTION

- 1. The child displays negative emotion in any manner (i.e., facial, vocal, or bodily emotion). The child's behaviors must match the context of a given situation.
- 2. The child directs negative emotion specifically at a particular person when already in contact with them. Emotion is directed at a specific person.

AGGRESSIVE BEHAVIORS, ESPECIALLY IN RESPONSE TO EMOTIONALLY AROUSING PROBLEM SITUATIONS

- 3. The child displays context-related interpersonal aggression (verbal or physical). Someone does something to which the child responds with aggression (emotionally arousing preceding events must be observed).
- 4. The child hits, kicks, shoves, knocks over, or throws objects (emotionally arousing preceding events must be observed).
- 5. The child displays unprovoked physical interpersonal aggression.

Emotionally Regulated/Prosocial

POSITIVE REACTIONS TO EMOTIONALLY AROUSING PROBLEM SITUATIONS

- 1. The child promptly verbally expresses feelings arising from a problem situation, then moves on to the same or a new activity (versus withdrawing, displacing the emotion onto others or objects, or staying upset).
- 2. The child shows primarily neutral or positive emotion.

SKILLS IN LEADING AND JOINING

3. The child smoothly approaches an already ongoing activity and gets actively involved. The child does not disrupt or antagonize other children as he/she approaches the activity.

PROSOCIAL BEHAVIOR

- 4. Taking turns: The child plays with a toy or participates in an activity and then allows another to do the same.
- 5. Cooperating: The child jointly works with a peer or group of peers to achieve a common goal.
- 6. The child shares toys or other materials (e.g., crayon, pencil, play dough, etc.).

Emotionally Positive/Productive

POSITIVE EMOTION

- 1. The child displays positive emotion in any manner (i.e., facial, vocal, or bodily emotion). The child's behaviors must match the context of a given situation. Examples: Smiling, laughing, singing, dancing, etc.
- 2. The child directs positive emotion specifically at a particular person when already in contact with them. Emotion is directed at a specific person.
- 3. The child displays positive emotion when in a social situation but does not direct it to anyone in particular.

INVOLVEMENT: PRODUCTIVE, FOCUSED, USE OF PERSONAL ENERGY

- 4. The child is engrossed, absorbed, intensely involved in activity. The child is emotionally invested in creative, productive, thematically organized, or other activity that has a positive emotional function.
- 5. The child is involved in an activity that he/she organizes for himself/herself; s/he is independent.

INVOLVEMENT: UNPRODUCTIVE, UNFOCUSED USE OF PERSONAL ENERGY (all items reversed)

- 6. *Vacant: The child displays a very flat, unexpressive, detached face; shows no involvement in an activity; and looks "emotionally absent."
- 7. Listless: The child looks fidgety and uninvested in the activity but still "emotionally present;" the child stays in one area but shows little/no involvement in activities or social interaction.

Appendix B

Observations

Action 02/08	Verbalization
Near the playset outside the box, A pulls a stick from R's hand. They go back and forth and A finally gets it out of his hand. Once A gets the stick out of his hand R runs across the ground towards the sand area. A looks at R running across the ground and continues playing with the stick. R spends some time on the other side of the ground and then goes and plays with the other kids.	R "STOP!"
H begins climbing the tree. B,E, and D climb the tree as well. They climb up pretty quick which makes it look like they have done it before. They each sit on different sides and H and D sit at a lower branch than B and E. D sitting on the tree and laughing. E and B looking at H and laughing.	D "AHHHHHHH!' Laughing H "I am going to die because it's so high!" In a volume that can be heard throughout that area of the ground. H "We need help!" Smiling and laughing while saying this. "Help! Help me!" (H) looking at the rest of the kids on the tree.

	E "I am going to save her!" But doesn't move from the area he is seated at.
Action 02/09	Verbalization
I sees me for the first time. Holds a leaf in his hand raising it higher towards his face. Begins pulling out the small leaves and points the stick towards me Walks away	"Look what I found!" "Oh! What is that?" (Me) "It's a different leaf" "This is what it looks like! Look!" "Oh wow that's interesting!"
After a few minutes walks towards me Walks away After a few minutes walks towards me holding a small crayon with	"Look it's a small pine!" "That's REALLY small!" "Yea!"
Puts it back on the ground and kicks some mud on it	"Look I found a crayon!" "Oh! What is a crayon doing here?" "Is it from 1999? I think I should put it back!" "I'm not sure when it's form!"
Walks away After a few minutes comes back with both his hands in his hoodie Pulls out a big rock from his pocket Walks away Comes back with a different type of stick Holds it high towards the top of his head pointed towards me	"Look! I found a huge rock today!" "Wow! That's really big!" "Yes I picked it up and put it in my lucky pocket!" "Look! I found another one! "This one looks different from the other one. Where did it come from?" "I picked it up from the ground. It was stuck there! I'm ripping it!" "Do you like ripping it?" "Yes, I just rip it!"
H sits on the ground digging with a plastic shovel. Keeps digging for a long time. D joins her and begins digging with another plastic shovel. H runs to go inside and D follows behind her but stops outside the door. D begins walking around. H comes back outside with boots on. H and D come back to the hole and begin digging again. H gets some soil from a different area Puts the soil from the shovel into the hole and begins digging again.	H "Do it like this. The soft soil helps the crunchy soil!"

Time to go home!	
Action 02/10	Verbalization
R is running up the hill and trips and falls on the ground in front of 3 teachers. She lays on the ground for some time with her face towards the ground. She stays there for sometime. She uses her two hands to push herself off of the ground looks at all the teachers with her head tilted towards the left and says: She looks at the teachers again. She gets off the ground and begins walking uphill while turning her head left and right	"Ouch" softly "Ouch"
02/13. Action	Verbalization
R is standing in front of the table and there is a structure on the table made of hollow blocks. R looks at the teacher and begins pushing the structure on the table with his toy in his hand. I goes running towards the gazebo. R looks at the teacher occasionally and continues pushing the structure. Teacher comes walking towards R. R begins walking with the teacher towards the gazebo. R comes back running to the table with the structure and pushes all the blocks off the table with the toy in his hand. Looks at the teacher and goes to the top of the slide. Sits in one section of the playset with his toy. Few minutes later he gets off the playset and goes and plays with A.	Teacher "R and I come hang up your book bags!" From under the gazebo R "Noooooo!"
02/14 Action	Verbalization

H, D, E and B are sitting on the tree with their legs hanging off of the branch. D is sitting on a branch that is quite low compared to where the rest of them are seated. D begins pushing the branch and it moves up and down with him on it.	D "CPR! CPR!" While D is moving the lower branch up and down H "we're going to die!"
All four of them swiftly get off of the tree and move to the playset. They walk towards the other side which has the ladder. E jumps off of the ladder area and lays on the ground. B who has been standing behind him at the top repeats what E just did. They both lay on the ground for a few minutes and get up again. They continue enacting the same scenario a couple of times. H and D join them. While B and E lay on the ground, H does the same B goes back on top and jumps again landing on his arm. They all move out of that area and go to different part of the ground.	E while sitting on the playset "I'm going to kill myself!" Says so laughing E "Goodbye world! See you in heaven!" H "It's a game to the future!" B "What's the time difference there?" H and D begin singing "Kill yourself! Kill yourself!" B "I keep killing my arm!"
Under the Gazebo U holds on to a toy in her hand. B pushes the toy and they both continue pushing and pulling the toy several times. Teacher interjects and asks U to move out of the area and sit outside the gazebo. U sits outside for a minute and comes back inside. Begins talking to V.	U "Stop!!" B "Stop!!" U "Stop!!"
02/16 Action	Verbalization

T and R curled up sitting inside the big flat bed. Teacher from the other class is playing music and most of the children circle around that area dancing. T "Somebody come squash us!" T screams again "Somebody come squash T and R are watching the rest of the us!" children and begin getting out of the bed and run towards them. They dance with the rest of the children for a few seconds and come back to the same bed. Curl up and sit next to each other. While most children are dancing B and E come to the slide area and climb up. B jumps and lands on the wood chips. E jumps off and runs towards B and begins pushing his body towards the ground with both his B "Look! I am going to die!" palms. B while laying on the ground "OUCH!" E "Sorry I think I went too far!" Teacher "What happened?" B gets up and walks away with his B "Nothing." eyebrows knit while touching the part E was pushing. E walks towards B but is standing at a distance while watching him. B sits on the bench for a while and E walks away. The children were eating lunch outside and E and B sat next to each other and ate their lunch while talking to each other.

V is sitting on a bench with 4 other children and 2 teachers. V looks distressed and is moving her hair off of her face several times while pouting. She opens her lunch box and looks inside.

She puts her head down and raises it back up several times. She continues pouting and sighing for most of lunch time.

"Uh... there's mayonnaise in my lunch." She says to herself

Teacher "V why aren't you eating?" V "It has mayonnaise in it and See is allergic to it."

Teacher "I isn't sitting with us here so you can eat your lunch"

V "No"

Teacher "Yes, I is sensitive to eggs but not allergic and he isn't here right now."

V "No"

T "Yes you can eat."

V "No"

T "Ok go play" V "uhh...!"

V closes her lunch bag and picks up

her placemat and bag and takes it inside.

02/21 Action

H and E standing on the edge of the box near the play set.

H and E start running at the same time but E goes across the ground faster than H. H sees that and slows down and stops mid way.

The entire time most children were running around the playground. E continued running occasionally taking breaks saying he was tired. E runs across the ground and at the same time D was walking across the groundand they bumped into each other. D falls to the ground and lays on the ground for a few seconds.

D lays on the ground for a few more minutes and E stands next to him watching what he is doing. E runs away and D continues to lay on the ground a little longer with his face towards the sky.

Verbalization

E "Let me show you how fast I really am!" H "Go!"

H "OH MY GOD! You are so fast! You really are sonic!"

E "Are you ok??"

D monotonously "Yes..."

E and H standing next to each other talking about something I couldn't hear so I went closer to listen to what they were saying. They look at each other after the conversation and run away. H was initially talking about B.	H "I'm scared she'a going to wrestle me." E "If someone wrestles you, you wrestle them back!" H "If you wrestle, they wrestle and the wrestling goes on!"
B pushes A to the ground with both her hands. B doesn't respond and goes to the other side of the ground. A looks for a teacher and tells them what happened. A and the teacher walk away together. Meanwhile H has been watching A and B. B's parent comes to pick her up and so she leaves. H while standing next to the other children tells them. The group of children walk away at a distance I cannot hear anymore. They also keep looking at me to make sure I do not listen to their conversation. He also tells me that their conversation is private so I don't go closer to them and walk away.	A "Ow!! B! Why did you push me??" H "She keeps pushing us and then she just goes BYE! Nobody tells her anything!"
02/23 Action	Verbalization

Next to the trees three children are making an anthill. To make sure what it was I asked them and they told me it was an anthill. They were collecting different resources from different parts of the ground to add to the anthill. H runs towards the gazebo with a bucket in her hand. I begins kicking the anthill with his right leg. I now taps the hill with his foot slowly. H comes running from the gazebo H reaches the anthill with a bucket full of medium sized rocks. While H and D ask I to stop kicking the anthill, R takes the bucket from H's hand and throws all the rocks on the ground. R runs away after that. H notices this and begins picking up each rock one by one and placing them back in the bucket. She moves closer to the anthill with the bucket in her hand and places	D "NO!! NO!! STOP! STOP!" H "NO!!"
	D "I'm making holes." H "No, do it after we keep the rocks."
	1
02/23 Action	Verbalization

E,B,I,T,H and D continue their anthill project and are now plucking berries from the tree next to the gazebo. B is standing next to the anthill placing his foot over the anthill but his foot isn't touching it. B walks away while shaking his head. The rest of them run towards the anthill and are placing the berries on top of the anthill. T places a berry on different side of the anthill and then places a rock on top of it. Four of them run back to the anthill.	E "She's going to destroy the anthill!" B "It's he not she!" E "You said he or she it is confusing sometimes." H "The berries are for the ants to eat." Teacher "You cannot pluck the berries from the tree, you can pick them up from the ground if you want to. The berries are for the birds to eat." H "T said we can't pluck the berries from the tree but we are giving the ants food! T doesn't understand. We are doing something good but T thinks it's wrong! We are feeding the ants!" H "Should we build a worm hill tomorrow?"
02/24 Action	Verbalization
H,D and I are deconstructing the anthill by picking up the berries and putting them to the side. They also dig the sand from the hill and place the sand to the side. They fill the bucket with stones. H is jumping up and down with her eyebrows knit. H places all the stones on the table and leaves the area.	Me "What happened to the anthill?" H "Nothing" While digging the sand I "The silly teachers told us so we're doing this." H "Why don't they understand?"
B is sitting on the hill rubbing a stick against a stone. B continues the same motion for a few minutes. B plays with E sometimes but E was not in school. B has been spending time alone the past few days where he occasionally leaves the group and goes walks alone or sits by himself.	B "I'm shaving the stick."

Q digging with a pan in the same motion as one would use a shovel. Q then takes another pan with holes in the bottom and flattens out the area moving the pan back and forth. The mud is entering the pan through the holes and Q looks at it and continues moving the pan back and forth. H comes running and places a bucket full of white sand next to Q.

Q places the white sand in the pan and moves it around while the sand falls through the holes.

Continues digging with the pan. H comes running with her hands full. H places wood shavings on the ground. H then runs away. I move to the bench. Q comes towards the bench and begins constructing a structure with the hollow blocks that are available outside.

H comes running and watches Q. Q points to the tip of his tongue.

Q has made a structure that looks like a tower with the hollow ends vertical towards the top. He begins to pour sand through the hole. He then lifts up the block and sees the sand is on the block that he had placed horizontally.

Q runs to get more sand. Time to go home. H "Here's some ice!" Q "oh"

Q "Are you upset? Tired? Frustrated?" Me "No, I am just a little cold"

Q "Have you ever gotten a frostbite?"
Me "No I don't think I have."
Q "I had one here once! Haha!
H "Here's some sprinkles"
Me "It's really cold today!"
H "I am cold too. I am more cold because I am a child!"
H "What is he making?"
Me "I am not sure. You'll have to ask

Q "wow! That's cool!"

03/06 Action

Verbalization

him."

B,P,E and H are running across the ground and they begin to slow down. B touches P's arm. P puts her arms around B P moves her arms from around B and walks away. They all move slowly towards the bench.	B "I feel like I can't feel my heart!" H "I feel like I'm dead!" B "Tag!" P "I don't want to play!" H "Don't be a sore loser." P "I'll punch you." P "I'll punch you and throw you from the fence. E "Get off of her." H "He" E "Her" B "Let go of me!"
E walks towards the bench where I am seated. E runs away.	E "How many people did you kill today? Me "None. How many people did you kill today?" E "A million! Hahahaha!" Me "How did you do that?"
H goes and gets more sand and puts it on my pants. H goes and gets more sand and puts it in my hair. H goes and gets a stick. Points the stick towards me.	H "That's pixie dust." Me "What does it do?" H "It makes you fly!" Me "But I can't fly!" H "It does the opposite. You're stuck now." Me "I AM stuck! How did that happen?" Me "Oh! I don't like it in my hair." H "I am sorry" H "This traumatizes your eyes." Me "Traumatize? Are you sure?" H "Yes, your eyes follow it." Me "OH!" H "Now you follow it!" Me "I thought it's just my eyes." H "You have eyes everywhere!" Me "But I only have these two eyes." H "You have eyes everywhere. They're on your hands too. I control them!" H "Come follow me!"
H takes me through the trees and points at a little tree. E comes running	Me "Ok" H "This is where all the candy is! Now I'll deliver the candy." E "I need to call my mom and apologize to her." Me "Why is that?"

Time to go home.	E "Because I gave her a hard time saying I didn't want to come to school today."
03/07 Action	Verbalization
H,E,D,B sitting on the big rock. H and D are sitting lower than B and E.	B "This is our house!" B "I'm trying to get on this! B "This is our house. Get out of our house!"
B slips and is grabbing on to the top of the rock. B climbs back on the rock and sits next to E.	
Q tries to climb the rock. Q continues trying to climb the	O "When did you kiek mee?"
rock and slips. B begins to slip again	Q "Why did you kick me?" E "We didn't kick you" B "I'm falling, I don't know if I'm going to die!" H "If you die I'll kiss you!"
H gets off the rock picks up a shovel and begin digging the ground. She then places the mud on the rock. H stops placing the mud on the rock. She then stands next to the rock.	B "Kiss me?" shocked E "EW!" B "H! Stop! We don't eat poop" E "Stop giving us poop!" B "We are not homeless. We don't eat poop!"
B and E get off the rock. Q and T are on the other side of the yard and go running towards the rock. They climb the rock and stand on it. E comes running back to the rock. E runs towards B and begins talking to him. Q and T continue to sit on the rock for a little longer.	Q "We got the house!" E "That's not your house!" Q "It's ours now!"

U is sitting on the play set and singing to herself. "Meet me outside! Meet me outside!" I walk towards her. "Hi U! What are you singing?" U "I'm waiting for my friend V!" Me "Oh! I thin she just came outside a few minutes ago.." U "There she is!!" U looks around the ground and sees V. U goes running towards V who is under the gazebo. U and V hold hands and walk down V "I need to tell you something.." the path towards the center of the playground. Mumbling something in U's ears. U "I know a game!! Let's spin!" U and V hold hands and start spinning around and laughing. 03/09 Action Verbalization A sitting on top of E while E is on B "Oh no! A got E!" all fours on the ground. A begins hugging E and E gets off the ground. They begin walking around the ground together and A is still hugging E while they are walking around the ground. A and E reach the area near the playset where most of the children take part in rough play. A continues hugging E. E begins crying and A lets go of him. E doesn't say anything but is crying and wiping his tears while walking away from the area. A gets on the ground to sit and watches them. B sees E crying. B walks B "Oh E is not fake crying! he's really towards E but stands a few steps crying!" away from him. E and B walk to the bench and E lays on the bench while B sits on the bench. H and D come running and sit with B and E on the same bench. H goes running and gets some wood chips in her hand and gives it to them. They take it. E pretends to eat the wood chips and throws them E "I don't want it!" on the ground.

H doesn't respond and just sits on

the bench.

R is sitting on the ground close to B holding on to a Yoda toy. B tries to take the toy from R's hands but is unable to do so. R continues to hold on to the toy. R immediately throws the toy away and B grabs on to it. B takes the toy and sits on the bench.	B "Give me my Yoda!" B "I don't want to play this game!" B "Teacher!!"
U walks around the ground smiling and saying Hi to everyone she sees. She lays on a rock with her toy and sings a song. V who was with U the last time I saw them was playing by herself on the other side of the ground.	
03/10 Action	Verbalization
D kicks the ball over the base of the playset and his expression immediately changes. His eyebrows are raised and his mouth is open while at the same time he is smiling. He continues kicking the ball around the ground and making the same expression every time he kicks it.	
D spends most of his time during the 30 minutes alone. He is first holding on to the basketball net and since the ring is higher it tilts down and the entire equipment is rolling around while he is holding on to it. He then walks around the ground and sits on the hill for sometime. He walks towards the door leading to the classroom and lays in front of it.	

A begins crying when B pulls the stuffed toy out of her hand. B looks at A but doesn't say anything. A walks towards the teacher while crying. A and the teacher sit outside the classroom door while the teacher is talking to her. She continues crying for sometime. Once A stops crying she goes back towards B and wants to play with him again. They both go to the bench and sit there talking to each other until outdoor time ends.