Aggression in Preschool and Predictions of Peer Reactions;
How Do Children Expect Their Peers to Feel in Response to Their Behaviors?

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ABSTRACT

AGGRESION IN PRESCHOOL AND PRECITIONS OF PEER REACTIONS; HOW DO CHILDREN EXPECT THEIR PEERS TO FEEL IN RESPONSE TO THEIR BEHAVIORS?

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Children's aggression at early ages is indicative of concurrent and future adjustment problems. The aggressive behaviors may be due to, for example, developmental delays, lack of experience in social situations, or the inability to understand social norms. Aggression in preschool is related to concurrent and later peer rejection, which tends to remain stable throughout elementary school, and feed into a cycle of aggressive behaviors and social impairment. Examining the development of aggression in preschool children is valuable to the understanding of how children view their own behaviors and how they believe others will respond to their behaviors. Data was collected from 364 preschool students from Northern Virginia via teacher-report, self-report, and behavioral observations. Results found that observed negative affect and negative reactions to frustration were significant predictors of teacher-rated

anger/aggression. However, gender interacted with these variables and boys that were rated higher on anger/aggression showed more negative affect than boys rater lower on anger/aggression. This effect was not seen for females. Positive reactions to frustration was also found to be a small, yet significant predictor of teacher-rated anger/aggression. Teacher-rated anger/aggression was not found to be related to child reported feelings or behaviors in a challenging situation. Children who chose that they would react aggressively in a challenging situation tended to predict that their peer would feel sad in response to their aggression. Following avoidant behaviors, children most likely expected their peer to feel happy. Analyses revealed that girls who chose to cry or manipulate in a stressful situation most frequently predicted their peer to feel happy in response to their crying. Children who chose to respond prosocially tended to expect their peer to feel happy as a result of their behavior. The results of this study show that aggressive children may be able to understand that their aggressive behaviors will have negative social consequences. These aggressive behaviors may not be because of a lack of emotion knowledge, but related more to impulse control.

CHAPTER 1: PURPOSE & GOALS

Research in the field of aggression has shown that aggressive tendencies can be identified as early as preschool (Davenport & Bourgeois, 2008; Eisenberg et al., 1999), and that these early behaviors can be indicative of long-term problems (Domènech-Llaberia et al., 2008; Roseth, Pellegrini, Bohn, Van Ryzin, & Vance, 2007). Being able to identify the children most likely to sustain these negative social interactions and understanding what components of the behavior to address with young children would allow for implementing better practices in trying to change these behaviors. Although many preschool children do utilize aggression in some social situations, it is at this age that they are acquiring new skills and aggressive responses should be subsiding (NICHD Early Childcare Research Network, 2001).

During the preschool years, children's cognitive and social skills are growing at incredible rates. One study found that between the ages of three and four, children were able to almost double the number of anger regulation strategies they could produce (Cole, Dennis, Smith-Simon, & Cohen, 2009). This increased skill is likely a result of having more social experiences and language abilities. Multiple studies have supported this idea with findings that show that by preschool, many conflicts are not settled by the use of physical aggression (Eisenberg et al., 1999; Eisenberg, Fabes, Nyman, & Bernzweig, 1994; Killen & Nucci, 1999; Thornberg, 2006). During the preschool period, children

become more able to understand how the mind works and find that there is a relation between their external actions and internal states (Baird & Moses, 2001; Wellman, Cross, & Watson, 2001). Because of these new skills, children are gaining recognition of techniques to emotionally regulate themselves, even in stressful situations (Denham, 1998; Lemerise & Arsenio, 2000). Consequently, it is much more common by this age that the children will use a non-aggressive strategy, such as talking about the issue or looking for support, to solve conflicts (Eisenberg et al., 1999). As these abilities develop, peers and teachers take notice of the children who are advancing in their skills, and those children that are not progressing as quickly.

Young children experience two main sources of interpersonal contact, which influence their social development: caregivers and peers. It has been reported that more than half of mothers are working outside the home and that a majority of children spend a substantial amount of time in child care (NICHD Early Childcare Research Network, 2001). The behaviors a child displays in the classroom at these early ages are a reflection of the majority of the social learning experiences that child has encountered and the skills they have developed through these learning experiences. Also, during the preschool years, children are becoming capable of more complex social exchanges. Spending more time with and playing with peers has been related to an increase in involved interactions and positive affect, as compared to solitary play (NICHD Early Childcare Research Network, 2001). Through their interactions, preschoolers are able to practice social skills and become proficient at dealing with anger-inducing situations.

As children age, perhaps in part because of these new anger regulatory strategies, they tend to become less apt to participate in aggressive behaviors (especially physically) (Murray-Close & Ostrov, 2009). However, some children continue to stay reliant on these more negative strategies. It is these children who are at increased risk for future peer rejection, externalizing problems, and a decreased ability to maintain relationships (Hartup, 1992). Although some of this variance in children's aggressive strategy usage might demonstrate an ultimately resolvable developmental delay (Feldman & Dodge, 1987; Mayeux & Cillessen, 2003), this is not true for all early aggressors. Children who exhibit many aggressive behaviors may also have a lower understanding of emotions within themselves and within others. Because of this lack of knowledge about the origins and consequences of emotions, aggressive children are likely to also show poorer social problem solving skills and less behavioral regulation. The purpose of this study is to examine a child's behaviors and thoughts about aggression in an attempt to understand the development of the early-life uses of aggression.

CHAPTER 2: SPECIFIC AIMS OF RESEARCH

Study Aim 1: To examine the relations between behavioral observations of affect and teacher-rated child aggression. The first hypothesis is that as children show increased negative affect, behavior, and reactions to frustration in the classroom, they will be rated higher on anger/aggression by their teacher. It is also hypothesized that children will show fewer sociable behaviors with their age-mates, including empathy, peer skills, and positive reactions to frustration, as their teacher-ratings for anger/aggression increase.

Study Aim 2: To explore the relations between a child's teacher-rated anger/aggression and a child's self-reported responses to a difficult situation. It is first predicted that children who pick angry emotional responses to such situations more frequently will be rated as being more angry/aggressive by their teacher than will than children who choose the anger emotional response less frequently. Second, it is proposed that children who choose "happy" as a response to an upsetting situation also will receive higher aggression ratings from their teacher, in part due to shared variance of lack of emotion knowledge when imagining the situation and aggressive tendencies. Finally, preschoolers who pick an aggressive action response to a challenging hypothetic peer situation will have a higher teacher-rated anger/aggression score.

Study Aim 3: To describe the association between children's reported actions and how they think their peers will react to their aggression. Because children who pick aggressive behavior choices in response to a stressful situation may have a skewed understanding of other's reactions to their behaviors, exploratory analysis will be done to examine the emotional responses these children think their peers will exhibit in response to their aggression. However, because aggression is not the only form of undesirable behavior in a challenging peer situation, other behavior and consequential emotion choices will also be examined and compared to the findings for aggressive responses. For example, children who choose to avoid a challenging peer situation may also have skewed understanding of how their peers will feel in response to their actions. Because children who choose to cry or manipulate the peer situation in response to stories about stressful situations might not have a typical representation of how peers will react to their behavior, their prediction of peer's emotional response in that situation will also be distorted. Children who choose to response prosocially to stressful situations will likely have a better understanding of how their peers should react to their prosocial behaviors due to increased social knowledge. Examining the predicated outcomes all of four of these behavior options will provide information on how aggressive children may think similarly or differently than children who choose other behaviors.

CHAPTER 3: BACKGROUND AND SIGNIFICANCE

The development of aggressive behaviors

Researchers typically define aggression as "behavior intended to hurt, harm, or injure another person" (Coie & Dodge, 1998). Aggressive behaviors and responses to these behaviors have been researched at extremely young ages. Although before the preschool years children may not fully have an understanding of the utility of aggression, physical aggression at this point is somewhat common and usually instrumental (e.g., stealing/taking what one desires, pushing, biting, and kicking) (Tremblay et al., 1999). By preschool, children are typically aware of the function of using aggression to reach a goal. Children are also utilizing relational aggression at this time (Crick, Casas, & Mosher, 1997; Ostrov, Pilat, & Crick, 2006). This form of aggression is used to impair or manipulate a relationship or inflict social damage to a peer. Spreading rumors or gossip, social exclusion, and avoidance can all be viewed as forms of relational aggression. As children age, they begin to understand the many potential ways in which aggression can be used to either reach a goal, to harm others, or as protection (Murray-Close & Ostrov, 2009).

The social information processing model suggests that we store mental interpretations and representations of past events, which are incorporated with other stored memories (Crick & Dodge, 1994). These memories guide processing of social

cues and is expected to be mostly automatic, not reflective. Using this model, there are several possible explanations for children's social difficulties (Crick & Dodge, 1994). First, they may have developmental or memory deficits interfering with the storing or recalling of correct social information. Also, they may be only attending to selective kinds of social cues. Lastly, they may have already formed maladaptive schemata for social exchanges, rendering them less able to attend to current social cues.

Another potential source or explanation of aggressive ideas and behaviors in young children is through modeling of behaviors. Modeling is an integral part of social cognitive theory, which believes that learning takes place by watching others' behaviors (Bandura, 1986). Thus, an individual's behavior, cognitions, and the environment are mutually influencing aspects of development. Witnessing frequent aggression in the home setting will likely alter the way a child thinks about aggressive acts. The thoughts resulting from this exposure will play an influential role on the way the child behaves. The thoughts and behaviors a person has about aggression will in turn shape aggression-related factors in their environments. The environment will provide feedback on thoughts and behaviors about the commonality of aggression. This model highlights one of the reasons that exposure to aggression in early childhood can stimulate a perpetual cycle of aggression.

This theory displays why factors reflecting a child's home situation are also related to their behaviors with peers and in child care. Socialization practices and biology have been shown to play an integral role in the early onset of antisocial behavior (Moffitt, 1993). For example, children with a sibling (most likely older) were found to be

generally more physically aggressive than only children (Tremblay et al., 1999). Presumably at least some of this increased physical aggression develops through modeling and internalization of behavior patterns, supporting Bandura's social cognitive view of learning. Many studies have found that children who come from aggressive home environments use more aggression with peers and similar child rearing practices with their own children (Kim, 2009; Putallaz, Costanzo, Grimes, & Sherman, 1998; Spinetta & Rigler, 1972). This research highlights how very young children can internalize schemas about social interaction, and how such internalization can lead to future behavior.

Children who are entering childcare and preschool situations with predispositions for aggression are starting these crucial social learning experiences with a disadvantage. Trying to work through conflicts with their age-mates gives children the chance to progress in their relationships with each other (Rizzo, 1992). If a child is too aggressive, it is difficult for them to interact positively with peers, work on their self regulation (Denham et al., 2002), and acquire adequate knowledge about emotions, behaviors, and social interactions. For example, coordinating the multiple goals of themselves and their peers is a particularly difficult aspect of social problem solving for young children (Crick & Dodge, 1994). Children who are seen as unpopular or socially inexperienced may not be ready cognitively to process and work through social situations with the same skill as their peers (Feldman & Dodge, 1987; Mayeux & Cillessen, 2003). Also, most preschoolers are able to ascribe reasons or causes of emotions and reasons for emotions being displayed (Denham et al., 2002; Denham, Zoller, & Couchoud, 1994). Having less

of an ability to recognize and control emotions will frequently lead to frustration and aggression in preschool children.

Young children's ideas about aggression

Preschool children already have ideas about the causes, display, and consistency of aggressive behaviors in peers. Giles and Heyman (2004) found that children credited aggression to internal reasons, more than they did for withdrawal. Specifically, this study found that preschoolers viewed aggressive behaviors as part of a person's nature and that the person would have behaved that way for a long time, making the behaviors impervious to change. Because children believe that aggressive tendencies are internal and difficult to alter, they may be hesitant to change their opinions of a peer or of their own actions, solidifying a reputation for being overly aggressive. Also, many preschool children who strongly believe that past aggressive behavior can foretell future bad behavior are less likely to use prosocial solutions during stressful peer interactions and are more likely to have a "normative" view of aggression (Giles & Heyman, 2003). This means that they consider aggression to be a suitable instrument for social problem solving (Huesmann & Guerra, 1997). In turn, children are more likely to approve of external demonstration of anger when they report above average levels of aggression themselves, instead of endorsing a more reflective style of control (Clay, Hagglund, Kashani, & Frank, 1996). Children may see their own or other's aggressive behaviors as being stable and thought of as non-problematic because they can reach the desired goal (Giles & Heyman, 2003).

Young children tend to be more accepting of the use of aggression when the provocateur was intentional in the situation which provoked the aggressive response (Ferguson & Rule, 1988). But, children who are more aggressive than their peers are also more prone to interpret many situations with hostile attribution bias (Denham et al., 2002; Mayeux & Cillessen, 2003). This means that the child perceives their peer as intending harm or as having malicious intent in a neutral situation, where no harm was actually deliberate. Because aggressive children truly believe that their peer meant to cause harm, they also believe that their aggressive response is justified. This interpretation makes it difficult for aggressive children to see the need to change their behavior.

Most children can also comprehend reasons for not expressing anger; to evade interpersonal costs and to not hurt someone else's feelings (Kerr & Schneider, 2008). The reasons why children usually do express anger are to either obtain help or positive behavior, or because they are so upset that they are not able to hide it (Kerr & Schneider, 2008). Using anger and aggression to achieve negative goals, such as causing harm to others, is typically indicative of a child without the capabilities to control or understand their behavior. As a result, highly aggressive adolescents report that they feel more effectual in carrying out aggressive conduct than their peers (Quiggle & Garber, 1992). This confidence is likely because they have utilized these behaviors for an extended time period and the behaviors were likely reinforced because they yielded the immediate desired result. The behaviors a preschooler develops become ingrained and as a result continue to influence their interactions and relationships.

Peer responses to aggression

Having an early inclination to use aggression commonly leads to peer rejection and lack of participation with age mates. Being excluded socially can hinder children's ability to control their aggressive behavior and further distort their ideas about the socialization of aggression (Twenge, Baumeister, Tice, & Stucke, 2001). Research has shown that although maladjusted children may not seem to make significant efforts or be successful at being involved with their age-mates, they would like to have peer relationships (Crick & Dodge, 1996). Not being able to interact with peers translates to not having the necessary experiences to acquire proper social skills. Not being able to attain desirable social skills and deal with aggression deters a child's ability to make and sustain friendships. As aggressive children grow older and continue to be rejected, they often form friendships only with other aggressive children. These events maintain the cycle of rejection from peers, poor social skills, and aggressive behaviors. Because this succession of events makes it difficult for a child to gain the needed learning experiences and skills to successfully interact, children will continue on this path of destructive behaviors. The experiences and knowledge about social interactions that is acquired in preschool has lasting implications for social relationships.

Concurrent problems with aggression

Social actions do not occur separate of one another. They are a succession of exchanges which are continually impacting the interactants' following actions (Roseth et al., 2007). This configuration of interactions is what makes up the history that

individuals think of as their social relationship (Roseth et al., 2007). When children are not successful at maintaining interaction, they are at risk for peer rejection and continue losing opportunities to participate in this stream of peer interactions, to gain needed social experiences. The majority of young children who display frequent aggression are rejected by their peers. Consequently rejected children are treated differently by their peers, which continues the cycling of behavior problems and aggression (Eisenberg et al., 1999; Murray-Close & Ostrov, 2009).

The way children deal with aggressive situations also differs greatly. Braza and colleagues (2007) found that not only were rejected children more often in conflict, but they were more commonly were directing this aggression at a particular person, as compared to poplar and neglected children. It is generally more common for children with a lower peer status to come up with controlling and authoritative responses to peer conflict as compared to positive, compromising answers to stressful situations (Eisenberg et al., 1999; Putallaz & Sheppard, 1992). This is illustrated by the finding that rejected children also displayed the most "seizing object" aggression in the classroom (Braza, et al., 2007). The use of unsuccessful or antisocial solutions has been found to be inversely related to the use of successful social problem resolutions (Mayeux and Cillessen, 2003). This predominance of aggression in rejected children's few social interactions adds to difficulties in establishing quality friendships (Braza et al., 2007).

Preschoolers who aggress are also frequently negatively appraised by their caregivers. Their negative qualities tend to form clusters. For example, when a child exhibits recurrent defensive angry and aggressive responses, they showed an increase in

parent-reported problem behaviors and decrease in teacher-reported socially appropriate behaviors (Eisenberg et al., 1999). A study by the NICHD (2001) reported that the children who mothers, caregivers, and observers saw as more positive and less aggressive were higher on cognitive and language development. Even if aggression-prone children display an appropriate, prosocial act or social attempt, their teachers are less likely to recognize this than similar acts in low aggressors (McComas, Johnson, & Symons, 2005). When these attempts at positive behaviors are not reinforced by teachers, it is more difficult for aggressive children to understand the value of using prosocial behaviors and they may not continue to try to use these competent solutions. Children's actions do not just alter the way others see their behaviors, but the way they view the child as a whole.

Childhood aggression predicting future problems

Physical aggression, relational aggression, and poor social problem solving all tend to correlate positively in preschool samples, and to remain that way over time (Eisenberg et al., 1999; Mayeux & Cillessen, 2003; Murray-Close & Ostrov, 2009; Tremblay et al., 1999). Disorderly behavior problems in preschool and kindergarten children are typically strong indicators of future, significant behavior troubles (Haapasalo & Tremblay, 1994; Tremblay, Masse, Vitaro, & Dobkin, 1995). Oppositional defiant disorder (ODD) and conduct disorder (CD) can be seen in aggressive children as young as five or six years of age (Denham, Blair, Schmidt, & DeMulder, 2002). Research has shown that trajectories for continued abnormal development begin to form during preschool (Davenport & Bourgeois, 2008). Regarding such trajectories, there is typically

a non-linear decrease in physical and verbal aggression over time (Roseth et al., 2007); however, it is crucial to note that aggression present in childhood, particularly *early* childhood, is linked to problems throughout adolescence and even through adulthood (Braza et al., 2007; Cillessen, Bukowski, & Haselager, 2000; Kerr & Schneider, 2008; Zahn-Waxler et al., 2008).

Many of the children who struggle with aggression are seen as having externalizing problems. Aggression may be the main externalizing issue, or else it may include a disorder such as previously mentioned conduct disorder or oppositional defiant disorder. This is troublesome because externalizing problems usually remain more stable over time, and are more impervious to interventions, as compared to internalizing problems (Graham & Hoehn, 1995). Furthermore, consistent and acute aggression has been shown to be a large risk factor for current and impending psychopathy (Domènech-Llaberia et al., 2008; Khatri, Kupersmidt, & Patterson, 2000; Schaeffer, Petras, Ialongo, Poduska, & Kellam, 2003).

Thus, behavior in preschool classrooms can predict adjustment into elementary school and beyond those years. Using disruptive/unconstructive anger reactions has been linked to poor behavior impulse control (Eisenberg et al., 1999), social adjustment (Coie, Lochman, Terry, & Hyman, 1992), continued problem behaviors (Coie & Dodge, 1998; Eisenberg et al., 1999), victimization and rejection (Perry, Perry, & Kennedy, 1992; Thornberg, 2006), and oppositionality (Denham et al., 2002). Early relational aggression is a strong indicator of loneliness, depression, and negative self-perceptions throughout

the school years (Crick et al., 1997). Children maintain defensive attitudes and continue to miss out on peer group situations which might allow them to gain the needed knowledge to succeed socially.

For adults, the patterns and risks present in childhood aggression are still seen, and also create more hazards to mental and physical health. Children who were rejected by their peers continue to experience rejection among different settings and over extended time (Cillessen et al., 2000). Antisocial issues many times occur in young children and stay persistently, possibly due to their early, concrete maladaptive thoughts about feelings and conflict (Zahn-Waxler et al., 2008). Having higher than normal rates of anger reactivity is related to type A behavior patterns and typically, having type A behaviors is linked with coronary heart disease (Heft, Thoresen, Kirmil-Gray, & Wiedenfeld, 1988). Many other future health risks, such as substance abuse (Mueller, Grunbaum, & Labarthe, 2001), asthma (Thomas et al., 2000), depression, and suicidal ideation (Kerr & Schneider, 2008) are linked to consistent use of aggression and hostile attribution bias in childhood. They way preschoolers learn to deal with and interpret stressful situations will influence their behaviors and health throughout adulthood.

CHAPTER 4: SIGNIFICANCE OF PROPOSED STUDY

Kerr & Schneider (2008) discussed the three ways that children's displays of aggression can be measured: self-report, behavioral observations, and parent/teacher reports. Because of potential bias in reporting, it is important to examine the consistency between observational reports and teacher reporting of aggression (Ostrov & Keating, 2004). Some children avoid showing their anger in certain social exchanges to avoid specific consequences, even though they are strongly feeling it (Parker et al., 2001; Underwood & Hurley, 1999). Because discrepancy exists, it is necessary to use multiple methods when studying childhood aggression, in order to triangulate and focus upon an aggregated view of the child.

The proposed study attempts to utilize all three methods of study. The Challenging Situations Task is a hypothetical self-report for the child in these difficult situations. The Minnesota Preschool Affect Checklist composite scores are based on trained observers' reports of the child. Finally, children's primary teacher in the childcare setting fills out the Social Competence and Behavior Evaluation for each participant. The inclusion of Head Start children and children from private centers provides a sample which allows for comparison and generalizablity based on socioeconomic status.

A closer examination of the links between children's perceived level of aggression and their ideas about peer responses to aggression will be able to highlight the necessary skills overly aggressive children may be lacking.

CHAPTER 5: SAMPLE AND PROCEDURES

This dataset contains information gather in 2006 and 2007 from a National Institute of Health Grant (NICHD (R01 HD051514-02), Assessing Social-Emotional Skills for School Readiness (ASSESR). The information was collected from 364 preschool children (ages three and four) about their affect, knowledge of emotions, and responses to challenging situations. Fifty-one percent were male. They were enrolled in one of 14 preschools; either a government-subsidized Head Start program or at a private Minnieland center. The centers were all from areas of Virginia: Woodbridge, Manassas, Fredericksburg, Dale City, Stafford, Spotsylvania, and King George. Basic demographic and background information was gathered on all of the children, such as ethnicity, amount of time spent in childcare, and parental information on factors including level of education and living situation. Children's ethnicity was classified as Caucasian, African American, Asian, American Indian/Alaskan Native, Hawaiian Native/Pacific Islander or multi-racial. Trained researchers observed children in their classrooms during free-play time using the Minnesota Preschool Affect Checklist (MPAC) (Denham & Burton, 1996; Sroufe et al., 1985) and administered the Challenging Situations Task (CST) (Denham, Bouril, & Belouad, 1991; Denham, Bouril, & Belouad, 1994). Teachers also filled out a questionnaire on each child's everyday activities and interactions; Social Competence and Behavior Evaluation (SCBE-30) (LaFreniere & Dumas, 1996).

CHAPTER 6: MEASURES

Behavioral Observation

The MPAC is a measure meant to incorporate aspects of affect and social interaction that are deemed to be significant to the development of children in preschool (Denham & Burton, 1996). For this assessment, a trained observer watched each child for five-minute segments during unstructured play time in the classroom. This was repeated on multiple days until there were four observations completed. There are 61 items on the MPAC coding scale which the observer either coded as present or not present for the five minutes. There are nine different scales on which the behaviors are grouped and composite scores are made by summing up the total behaviors across all four visits; positive affect, negative affect, inappropriate affect, involvement, lapses in impulse control/negative response to frustration, positive response to frustration, unusual behavior, skills in leading and joining, and empathy and prosocial behavior. This scale has been able to show validity and reliability for this age of children (Sroufe et al., 1985) and is able to demonstrate effects of intervention (Denham & Burton, 1996). For the purposes of this study, empathy and prosocial behavior ($\alpha = .51$), skills in leading and joining ($\alpha = .33$), and positive reactions to frustrations ($\alpha = .55$) are used together to create a "sociable" variable. Negative affect ($\alpha = .69$) and negative reactions to frustration ($\alpha = .48$) are also used together to create "negative affect and behaviors." By

evaluating these behaviors, one can see a child's usual way of interacting and gain a sense of how well they can apply the social knowledge that they have learned.

This behavioral observation is valuable because it accounts for the social context of displayed behaviors and their appropriateness within the given social situation, which may be an important moderator for children and social adjustment (Crick & Dodge, 1994). Being able to credit the strategies used with frustrating situations, such as avoiding the situation or seeking help, is an important distinction to make between children's behaviors. This is because different forms of coping behaviors may be displayed and are sometimes more obvious than the use of aggression, but negative coping strategies can be frequently linked to the use of aggression (Eisenberg et al., 1999). This measure also allows for recognition of facial expressions and their appropriateness in the ongoing interaction (Sroufe et al., 1985). The authors attempted to bridge the fact that affect plays a role in all stages of communication and this role can be evident to observers, but challenging to measure. The MPAC items differentiate the beginning and the maintaining of interactions, who initiated the interaction, and the affect displayed at different time points in the social exchange. These early tendencies are valuable in trying to identify children who may be in jeopardy of externalizing problems.

Behaviors in a challenging situation

Three situations that were deemed as challenging for preschoolers were chosen to make up the CST (Figure 1). These situations are categorized as "one which would elicit

affect and test the limits of the child's behavioral abilities within the crucial peer relationship" (Denham et al., 1994). The focus of this part of the data is to determine behavioral and affective reaction that a child would have to these certain peer interactions. The first situation depicts having one's block tower knocked over by a peer. Second, a peer in the sandbox hits the child on the head with a shovel. Finally, a peer takes away a ball. Being provoked by a peer is an area in which age accounts for quite a bit of difference in competent behavior responses (Dodge, McClaskey, & Feldman, 1985). The story is told verbally by a trained researcher, with 3x4 inch cards depicting the situation, emotions, and actions for the children to reference and use to answer. The cards are laid down step-by-step, equidistant apart in front of the child. The children are first told a short story and asked how they would feel if that situation happened to them (happy, sad, angry, or just ok) (Figure 2) and if they would feel that way a little or a lot (represented as a small circle and a large circle). Next they choose how they would react to that situation behaviorally; being prosocial, aggressing, manipulating, or avoiding. Figure 3 shows these behaviors as depicted in the blocks scenario. The prosocial options were to discuss or try to resolve the problem. Aggressive options were actions such as hitting or forcefully taking an object. The manipulative response was crying and getting upset. Withdrawing and leaving the situation entirely was depicting the avoidant option. The child then chooses how they think their peer would feel and react behaviorally, using the same categories and procedures as the first part of the story. Finally, the child chooses how they would feel at the end this encounter. This task for children represents the three cognitive stages that children go through before enacting on a behavior; first

they encode and interpret the situation, next they think about the options they have for their response, and finally they carry out the behavior which they choose (Dodge, Pettit, McClaskey, & Brown, 1986). This measure has shown to be valid for children of this age group (Denham et al., 1994).and found reliable for the child's self-felt emotion ($\alpha = .55$), for the child's own behavioral response ($\alpha = .43$), and for the predicted peer's emotional response ($\alpha = .32$).

Teacher report of child behaviors

The SCBE-30 is a shortened version of the original social competence and behavior evolution, which contained 80 items (La Frenière, Dumas, Capuano, & Dubeau, 1993; LaFreniere & Dumas, 1995). These items are rated on a Likert scale, typically done by the child's teacher, and were intended to summarize the child's relationships with peers and teachers. The SCBE gives consistent descriptions of affect and behaviors and it is a proficient tool for screening that can distinguish between certain types of issues. This evaluation measures constructs that are based on developmentally appropriate levels of social adaptation and competence, and it is sensitive to behavior changes over time. The behaviors focus on social competence, emotion regulation and expression, and adjustment difficulties. This measure is intended for children between 30 and 78 months. Because the assessment was growing in popularity, there was a desire to shorten it and make it more functional, while still retaining its efficacy. The reexamination of the SCBE-80 allowed researchers to pinpoint three major areas (social competence, externalizing behaviors, and internalizing behaviors) which were the main

substance of the assessment. Ten items from each category were picked based on having the highest factor loadings (LaFreniere & Dumas, 1996). The concluding 30 item measurement can be separated to form three individual composite scores: anger/aggression, sensitivity/cooperation, and anxious/withdrawal. The shortened version as not found to have any loss in test-retest reliability, internal consistency, or temporal stability from the original SCBE-80 (LaFreniere & Dumas, 1996). The correlations between the indexes on the 80 item version and the shortened version were extremely high (between .92 and .97). All three scales have shown internal consistency of a high degree, with alphas ranging between .80 and .92. The estimates of reliability for the SCBE-30 are between .72 and .91 (LaFreniere & Dumas, 1996).

Of the three composite scores that are calculated from the SCBE-30, this study will focus on the anger/aggression variable ($\alpha = .94$). LaFreniere and Dumas (1996) stated that this score is able to be regarded as the preschool counterpart to the label of "conduct disorder" or "externalizing symptoms." The items which make up this internal scale encompass a variety of behaviors children of this age may show as a result of their anger or aggression. The questions acknowledge how frequently a child displays behaviors that are angry, aggressive, selfish, and defiant. The children who receive excessively high scores on this subscale are usually the children who show their negative emotions by means which harm or alarm those around them and are socially rejected (LaFreniere & Dumas, 1996). The authors also found that these children often show inadequate functioning in many social settings.

CHAPTER 7: RESULTS

Descriptive Statistics

Of the 364 children in the study, 183 (50.3%) were male and 181 (49.7%) were female. One hundred ninety-five attended a Minnieland program (53.6%) and the remaining 169 were at Head Start programs (46.4%). Less than 6% of mothers who gave education information had not completed high school. The sample included 41.5 % Caucasian subjects, 37.1% African American, 2.2% Asian, .8% American Indian/Alaskan Native, and .3% Native Hawaii/Other Pacific Islander. More than one race was reported for 7.1% of subjects. In addition, 14.8% reported their ethnicity as Hispanic or Latino. The average age of children when administered the CST was 53.1 months old, with a range of 35 months to 68 months. Of our total sample, 325 children had complete CST data, 330 had the SCBE completed, and 352 had MPAC data. Means and standard deviations for the variables used in analyses are presented in Table 1.

Behavioral Observations of Affect and Teacher-Rated Aggression

Linear regression was used to predict scores on the SCBE anger/aggression composite from the MPAC negative affect and MPAC negative reactions to frustration composite scores. These variables were significant predictors of teacher-rated child aggression (see Table 2), $F(1,319) = 19.75$, $p < .05$, $R^2 = .11$. This model showed a

positive relation; as observed negative affect and behaviors increased, so did teachers' ratings of the child's anger/aggression.

Table 1. Means and Standard Deviations for Main Variables

	M	*SD*
SCBE anger/aggression score	1.97	1.03
Sociable composite	1.14	.84
Empathy and prosocial behaviors	.53	.52
Skills in leading and joining	.33	.33
Positive reactions to frustration	.28	.27
Negative affect and behaviors composite	.69	.76
Negative affect	.58	.63
Negative reactions to frustration	.10	.23

* = $p < .05$

Table 2. Negative Affect and Behaviors Predicting Anger/Aggression

	Unstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B			
	B	Std. Error	β	Lower Bound	Upper Bound	R^2	*F*
Model	1.69	.07		1.55	1.84	.11*	19.75*
Negative Affect	.33	.10	.20*	.14	.52		
Negative Reactions to Frustration	.85	.27	.19*	.32	1.38		

* = $p < .05$

For analysis of gender interactions, centered variables were used. They were created by taking the child's actual composite score minus the mean. Gender had a significant interaction with negative affect when predicting teacher-rated

anger/aggression, as shown in Table 3. Figure 4 illustrates this interaction. Males showed more negative affect overall as compared to females. Boys who were rated higher on anger/aggression also showed more negative affect than boys rated lower on anger/aggression. Females did not show a similar increase in observed negative affect when they were rated higher on anger/aggression.

Table 3. Gender Interaction with Negative Affect and Behaviors Predicting Anger/Aggression

	Undstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B			
	B	Std. Error	β	Lower Bound	Upper Bound	R^2	*F*
Model	2.19	.08		2.04	2.34	.15*	12.51*
Sex	-.40	.11	-.19*	-.61	-.18		
Negative Affect	.60	.13	.34*	.34	.86		
Negative Reactions to Frustration	.70	.35	.13*	.01	1.38		
Sex by Negative Affect	-.50	.20	-.18*	-.89	-.11		
Sex by Negative Reactions to Frustration	.14	.69	.01	-1.21	1.49		

* = $p < .05$

Linear regression was also used to examine the potential relation between observed sociable behaviors (empathy and prosocial behaviors; positive reactions to frustration; and skills in leading and joining) and SCBE anger/aggression (Table 4). The

only significant variable was positive reactions to frustration predicting 2% of the variance in anger and aggression above and beyond that accounted for by empathy and prosocial behaviors and skills in leading and joining, $\Delta F(1,318) = .01$, $p < .05$, $\Delta R^2 = .02$.

Table 4. Sociable Behaviors Predicting Anger/Aggression

	Unstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B			
	B	Std. Error	β	Lower Bound	Upper Bound	R^2	*F*
Model	1.93	.10		1.74	2.13	.02*	2.44*
Empathy and Prosocial Behaviors	-.09	.12	-.04	-.33	.16		
Skills in Leading and Joining	-.21	.19	-.07	-.58	.16		
Positive Reactions to Frustration	.57	.22	.15*	.13	1.01		

* = $p < .05$

For analysis of gender and sociable behaviors, centered variables were also used. Gender did have a main effect showing that boys were rated higher on anger/aggression by their teachers than girls. But, gender did not have a significant interaction with any of these variables when predicting teacher-rated anger/aggression (Table 5).

Table 5. Gender Interaction with Sociable Behaviors Predicting Anger/Aggression

	Undstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B			
	B	Std. Error	β	Lower Bound	Upper Bound	R^2	*F*
Model	2.22	.08		2.06	2.37	.08*	3.81*
Sex	-.47	.11	-.23*	-.69	-.25		
Empathy and Prosocial Behaviors	-.04	.18	-.02	-.38	.31		
Skills in Leading and Joining	-.10	.29	-.03	-.67	.47		
Positive Reactions to Frustration	.75	.29	.19*	.17	1.32		
Sex by Empathy and Prosocial Behaviors	-.05	.25	-.02	-.54	.44		
Sex by Skills in Leading and Joining	-.20	.38	-.05	-.93	.54		
Sex by Positive Reactions to Frustration	-.32	.45	-.06	-1.21	.57		

* = $p < .05$

Teacher-Rated Aggression and Child Self Reported Actions

Pearson correlations were used to analyze the relation between teacher-rated aggression of a child and the child's reported actions in the challenging situation. Scores on the SCBE anger/aggression composite were not significantly related to the number of times a child chose the angry emotional response on the CST, $r(328) = .05$, $p = .38$. SCBE anger/aggression was not significantly related to the number of a times a child

chose happy on the CST, $r(328) = .03$, $p = .62$. Anger/aggression was not significantly correlated with the total number of times a child chose to respond aggressively on the CST, $r(328) = .10$, $p = .09$.

Children's Expectations of Peer Emotions

Chi squares were run to examine the ways children expected their peers to feel in response to their behaviors on the CST. Analyses were done for each of the four behaviors (aggressive, avoidant, manipulative, and prosocial) within each of the three scenarios (blocks, sandbox, and soccer). Gender differences were also examined. The observed *N* for each scenario overall, for males, and for females are displayed in tables six through 17. Odds ratios were calculated for significant results, with 1.5 being a small effect size, 3.5 a medium effect size, and 9 a large effect size.

Aggressive responses were examined first. The analyses for the blocks scenario (table 6) showed non-randomly distributed results for children who chose aggressive behaviors, $\chi^2(3, N = 40) = 10.00$, $p < .05$. Odds ratios showed that after choosing aggression on the blocks story, children were most likely to choose that their peer would feel sad rather than okay (9.1) and rather than angry (2.5). Children were also more likely to choose happy more than okay (4.7) and angry more than okay (3.6). No gender differences appeared for this scenario (males, $\chi^2(3, N = 18) = 2.33$, $p = .31$; females, $\chi^2(3, N = 22) = 2.36$, $p = .50$).

Table 6. Predicted Peer's Emotional Response to Aggressive Behavior (Blocks Scenario)

	Overall*	Male	Female
Happy	11	5	6
Sad	17	9	8
Angry	9	4	5
Ok	3	0	3
Total	40	18	22

* = $p < .05$

The peer emotional responses given in reply to aggression in the sandbox story (Table 7) showed randomly distributed results overall, $\chi^2(3, N = 60) = 6.53$, $p = .09$. Analysis by gender showed that females who chose aggression in this story did have non-randomly distributed expectations for their peer's emotional response, $\chi^2(3, N = 33) = 12.94$, $p < .05$, but males did not, $\chi^2(3, N = 27) = 6.63$, $p = .09$. The odds ratios for females in this scenario showed that after choosing aggression on the sandbox story, these girls were most likely to expect their peer to be sad instead of angry (7.7), okay (6.0), and happy (3.9). They were also more prone to choose happy instead of angry (2.0) and instead of okay (1.5).

Table 7. Predicted Peer's Emotional Response to Aggressive Behavior (Sandbox Scenario)

	Overall	Male	Female*
Happy	18	11	7
Sad	21	4	17
Angry	13	9	4
Ok	8	3	5
Total	60	27	33

* = $p < .05$

Children who selected that they would respond aggressively on the soccer scenario (Table 8) did show non-randomly distributed expectations for their peer's reaction, $\chi^2(3, N = 50) = 12.24$, $p < .05$. Odds ratios showed that after children chose to aggress in the soccer story, they were most likely to choose happy as compared to okay (6) and angry (3.5) and also more likely to choose sad over okay (4.6) and angry (2.7). Results for females in particular produced significant results in this scenario, $\chi^2(3, N = 26) = 8.15$, $p < .05$, but results for males did not, $\chi^2(3, N = 24) = 6.33$, $p = .10$. Odds ratios showed that following aggression in the soccer story, females were apt to choose sad over okay (8.8) and angry (4.0) and more likely to select happy over okay (6.4) and angry (2.9).

Table 8. Predicted Peer's Emotional Response to Aggressive Behavior (Soccer Scenario)

	Overall*	Male	Female*
Happy	20	11	9
Sad	17	6	11
Angry	8	4	4
Ok	5	3	2
Total	50	24	26

* = $p < .05$

Analyses for avoidant behavior options also produced several significant results (Table 9). Analysis of the children who chose this option on the blocks scenario did produce significant results overall, $\chi^2(3, N = 155) = 21.44$, $p < .05$. Females in particular also tended to have non-randomly distributed expectations, $\chi^2(3, N = 76) = 18.63$, $p < .05$,

although males did not, $\chi^2(3, N = 79) = 5.91$, $p = .12$. Odds ratios revealed that following avoidance in the blocks scenario, children overall chose happy over okay (4.3), angry (2.2), and sad (1.8). For females, odds ratios showed that after picking the avoidant behavior response to the blocks scenario they also predicted their peer to feel happy instead of okay (7.2), angry (3.2), and sad (1.7). Girls also reported that their peer would be sad more than okay (5.3) and angry (1.9).

Table 9. Predicted Peer's Emotional Response to Avoidant Behavior (Blocks Scenario)

	Overall*	Male	Female*
Happy	60	28	32
Sad	41	18	23
Angry	34	20	14
Ok	20	13	7
Total	155	79	76

* = $p < .05$

Analysis of the sandbox portion of the CST (Table 10) did not show any significant results overall for avoidant behavior, $\chi^2(3, N = 145) = 5.76$, $p = .13$, or by gender (males, $\chi^2(3, N = 71) = 1.96$, $p = .58$; females, $\chi^2(3, N = 74) = 4.16$, $p = .24$.

Table 10. Predicted Peer's Emotional Response to Avoidant Behavior (Sandbox Scenario)

	Overall	Male	Female
Happy	41	19	22
Sad	38	18	20
Angry	42	21	21
Ok	24	13	11
Total	145	71	74

* = $p < .05$

The soccer story (Table 11) did show non-randomly distributed expectations following avoidance overall, $\chi^2(3, N = 169) = 24.35$, $p < .05$; for males, $\chi^2(3, N = 79) = 11.89$, $p < .05$; and for females, $\chi^2(3, N = 90) = 12.67$, $p < .05$. Overall, odds were that after choosing to avoid in the soccer scenario, children would choose happy more than sad (3.0) more than angry (2.9), and more than okay (2.8). Similar results were found for females (3.2, 2.8, and 2.6, respectively) and for males (2.8, 3.1, and 3.1 respectively).

Table 11. Predicted Peer's Emotional Response to Avoidant Behavior (Soccer Scenario)

	Overall*	Male*	Female*
Happy	70	33	37
Sad	32	16	16
Angry	33	15	18
Ok	34	15	19
Total	169	79	90

* = $p < .05$

Although the analyses for children who chose to cry/manipulate for the blocks scenario (Table 12) did not show significant results overall, $\chi^2(3, N = 25) = 7.16$, $p = .07$,

or for males, $\chi^2(3, N = 9) = 4.78$, $p = .19$, non-random distribution was found in female expectations, $\chi^2(3, N = 16) = 9.50$, $p < .05$. Odds ratios showed that girls who chose that they would cry in the blocks story were most likely to choose happy over sad (19.3), over okay (9.0), and over angry (3.9) for their peer's emotional response. They were also more likely to select angry instead of sad (5.0) and instead of okay (2.3).

Table 12. Predicted Peer's Emotional Response to Manipulative Behavior (Blocks Scenario)

	Overall	Male	Female*
Happy	10	1	9
Sad	2	1	1
Angry	9	5	4
Ok	4	2	2
Total	25	9	16

* = $p < .05$

The analyses for children who chose crying in the sandbox story (Table 13) did not yield significant results overall, $\chi^2(3, N = 30) = 2.53$, $p = .47$; for males, $\chi^2(3, N = 15) = 2.33$, $p = .51$; or for females, $\chi^2(3, N = 15) = 5.00$, $p = .17$.

Table 13. Predicted Peer's Emotional Response to Manipulative Behavior (Sandbox Scenario)

	Overall	Male	Female
Happy	11	4	7
Sad	7	3	4
Angry	7	6	1
Ok	5	2	3
Total	30	15	15

* = $p < .05$

Also, the analysis of choosing crying in the soccer scenario (Table 14) did not produce significant results overall, $\chi^2(3, N = 21) = .91$, $p = .82$; for males, $\chi^2(3, N = 6) = 3.00$, $p = .22$; or for females, $\chi^2(3, N = 15) = .40$, $p = .82$.

Table 14. Predicted Peer's Emotional Response to Manipulative Behavior (Soccer Scenario)

	Overall	Male	Female
Happy	5	1	4
Sad	7	1	6
Angry	5	0	5
Ok	4	4	0
Total	21	6	15

* = $p < .05$

For the blocks scenario (Table 15), non-random distribution of expectations for peer's emotional response was found for children who chose to respond prosocially overall, $\chi^2(3, N = 113) = 30.61$, $p < .05$; for males, $\chi^2(3, N = 57) = 8.05$, $p < .05$; and for females, $\chi^2(3, N = 56) = 33.86$, $p < .05$. Odds ratios showed that overall, children who chose to behave prosocially selected happy more frequently than okay (6.7), sad (4.2), and angry (1.9), and also angry more than okay (3.5) and sad (2.2) as their peer's response to their prosocial behavior. Females who picked prosocial behavior showed similar patterns with happy being most often chosen over okay (23.6), sad (7.0), and angry (4.9)and angry being chosen more than okay (4.8). Males who chose prosocial for the blocks story were more liable to select angry over sad (3.1) and okay (3.1) and also happy over sad (2.5) and okay (2.5).

Table 15. Predicted Peer's Emotional Response to Prosocial Behavior (Blocks Scenario)

	Overall*	Male*	Female*
Happy	50	18	32
Sad	18	9	9
Angry	33	21	12
Ok	12	9	3
Total	113	57	56

* = $p < .05$

Results from the sandbox story (Table 16) were also all significant overall, $\chi^2(3, N = 94) = 34.43$, $p < .05$; for males, $\chi^2(3, N = 46) = 11.57$, $p < .05$; and for females, $\chi^2(3, N = 48) = 28.83$, $p < .05$. Odds ratios showed that overall, children who decided to behave prosocially in the sandbox story most commonly chose happy rather than angry (8.4), sad (5.3), and okay (3.3). They were also more likely to select okay instead of angry (2.6) and sad (1.6). Boys who picked prosocial showed a similar pattern, mainly predicting happy over angry (5.6), sad (4.0), and okay (2.7) and okay being predicted more frequently than angry (2.1) and sad (1.5). Females also selected happy most often as compared to angry (13.0), sad (6.9), and okay (4.0), and okay more than angry (3.3) and sad (1.7) as their peer's response to prosocial behavior.

Table 16. Predicted Peer's Emotional Response to Prosocial Behavior (Sandbox Scenario)

	Overall*	Male*	Female*
Happy	47	21	26
Sad	15	8	7
Angry	10	6	4
Ok	22	11	11
Total	94	46	48

* = $p < .05$

The soccer story (Table 17) had all significant results for prosocial behavior; overall, $\chi^2(3, N = 85) = 99.99$, $p < .05$; for males, $\chi^2(3, N = 46) = 49.48$, $p < .05$; and for females, $\chi^2(3, N = 39) = 50.95$, $p < .05$. Odds ratios showed that children who chose prosocial in the soccer scenario overall were most likely to chose happy instead of angry (40.7), sad (24.5), and okay (17.1). Males who selected prosocial for the soccer story had similar results with happy being most frequent as compared to angry (32.8), sad (24.0), and okay (12.7). Also, females picked happy more than angry (53.7), sad (25.4), and okay (25.4) as their peer's response to their prosical behavior.

Table 17. Predicted Peer's Emotional Response to Prosocial Behavior (Soccer Scenario)

	Overall*	Male*	Female*
Happy	61	32	29
Sad	8	4	4
Angry	5	3	2
Ok	11	7	4
Total	85	46	39

* = $p < .05$

CHAPTER 8: CONCLUSION

Discussion

As predicted, children's observed negative affect and behaviors predicted their ratings of anger/aggression by their teacher. When children displayed more negative affect and negative reactions to frustration, their teachers tended to rate them higher on anger/aggression. This finding indicates a consistency between teacher's views of children they consider angry/aggressive and behavioral observations of anger and aggression in children. The first portion of the model looked specifically at how frequently children displayed negative affect in their typical interactions with their peers and found these behaviors to be related to anger/aggression. Because the MPAC negative affect scale measures sadness and other negative emotions in addition to anger, these children appear to be more negatively emotional in interactions, even when they may not be aggressing. Their peers will be less likely to choose to spend time interacting with them if they are consistently showing more negative affect than other children in the classroom. The second piece to this model showed that children who do not deal with frustration well are also rated higher on anger/aggression. Children who aggress may have this type of behavior as their first instinct to frustration or stress. As a result, these behaviors will discourage their peers from interacting and forming friendships with them, continuing to deprive them from experiencing successful interactions.

Gender also predicted anger/aggression. Males and females showed similar amounts of negative affect when they were rated by their teacher as being low on anger/aggression. However, as ratings of anger/aggression got higher, boys and girls showed different patterns. Girls appear to stay at about the same level of observed negative affect. Boys show a marked increase of negative affect. The types of aggression utilized by males and females may be partially responsible for this interaction. Even at this young age, females might be using more relational and covert forms of aggression in the classroom (Crick, Casas, & Mosher, 1997; Ostrov, Pilat, & Crick, 2006). These types of aggressive behaviors are not easily identifiable. Boys are typically more likely to use physical and overt aggression. These forms of aggression utilized by boys tend to appear in ways that produce more visible negative affect. Although a boy and a girl may be rated by their teacher as having the same level of aggression, the male's aggressive behaviors would be more physically visible and sensitive to behavioral observation.

The sociable behaviors variables did not significantly predict much of the variance for teacher rated anger/aggression. The only portion of this model that did account for a slight amount of variance was positive reactions to frustration. Although this finding appears to be counterintuitive to the previous finding of negative reactions to frustration, the differences may be a result of how the MPAC looks at frustration. Behaviors which fall under "positive reactions to frustration" include showing negative affect, but talking about the situation and as a result either feeling better, or staying upset. The act of a preschooler simply verbalizing their feelings and the fact that they are upset

about the situation is a step in the right direction. So, the MPAC considers these behaviors to be a positive reaction to frustration. However, the SCBE includes such items as "irritable, gets mad easily," "easily frustrated," and "gets into conflicts with other children." This may cause the teacher to consider certain aspects of a child's reactions to frustration and rate them higher on these variables. Also, this association could be indicative of a reactive group of young children who may show more frequent frustration than other children, but appear to be still developing certain social skills. Although these children are experiencing frustration, they may not be as likely to continue to aggress into adolescence and adulthood because they are learning behavior and social skills to cope with their frustration.

Anger/aggression as measured by the child's teacher was not related to the choices children made behaviorally or emotionally on the CST. However, the correlation with the number of times a child chose to respond aggressively on the CST approached significance. Because teacher rated anger/aggression was not related to child predicted anger on the CST, this finding could be an argument for children who show more aggressive behaviors not having an adequate understanding of their emotional reactions that lead to aggressive behaviors. During the CST, children may not be able to comprehend or recall the type of emotion that they feel as a result of situations like these. This deficit may be especially pronounced in children who aggress, due to their incomplete emotion knowledge and failure to understand that anger precedes their aggression. Hostile attribution bias might also be related to this potential tainting of children's memory and lack of correlation between child-reported and teacher-reported

anger. Children who aggress are likely to believe that their use of aggression in such a situation was justified because of the perception of their peer's malicious intent. This misinterpretation may cause them to not perceive or cognitively process their "anger" in the same way as others. For young children, it may be easier for them to draw to mind how they would respond behaviorally, because those behaviors are more concrete, as compared to emotional states.

The analyses examining children's behavioral choices on the CST and how they thought their peer would feel yielded several significant results. When choosing aggression, children overall were non-randomly distributed for two stories (blocks and soccer) and females in particular were also skewed for two stories (sandbox and soccer). In three out of the four significant analyses, sad was the most frequently chosen peer emotion response. This information can be used to argue that at this age, children can already understand that their aggressive actions will upset others. However, children who aggress may not see their peer's sadness as negatively as children who do not aggress. If their peer is sad, the aggressor has likely accomplished their goal and the peer is probably not going to try to retaliate or aggress in response. A more in-depth examination of the perceptions of their peer's sadness may reveal a large amount of insight into why some children choose aggressive behaviors. If these children are indeed capable of understanding that their actions will have negative consequences, it is important to examine why they utilize aggression as their first choice in a stressful situation and how to effect their impulse reaction to respond aggressively.

The only time significant effects were found for peer's predicted emotional response to aggressive behavior when examining separately by gender, was for females. This gender discrepancy in children who aggress might be due to basic gender differences in emotion knowledge and socialization. Because of the way boys are socialized, teachers and parents may consider it more typical or tolerable for boys to aggress as compared to females and as a result, young boys may be less likely to understand the consequences of their aggressive behavior. Modeling can play an important role in this dichotomy. Mothers are much more likely to value teaching about emotions and talking to their children about emotions compared to fathers (Denham, Bassett, & Wyatt, In press). This same study also found that mothers report more positive reactions to their children's emotions than fathers. It is probable that young girls have observed and been trained to know that aggression is not an appropriate response to a frustrating situation and to explore more prosocial behaviors. Modeling may likely teach females the importance of understanding or acknowledging their emotions (and their peers' emotions) in all situations.

Avoidant behaviors also produced several significant results. In all five analyses that were significant, happy was the most frequently chosen emotional response for their peer. Although their withdrawal from the situation might make their aggressor happy by giving them a desirable outcome, children who avoid these situations may not be fully aware of the emotions their peer is experiencing. The lack of significant findings for avoidance might be related to the inherent nature of withdrawal. These children who avoid are leaving their peer and cutting off contact in this situation. Children who

withdraw from these stressful situations are not actually experiencing or witnessing the emotional response of their peer. Although this action may not make the aggressor happy, the fact that the situation is not escalating and the aggressor is no longer interacting with the child that chooses to avoid will lead these children to the conclusion that their behavior is the best option in the situation.

The analyses for children who chose to cry or manipulate in stressful situations only produced one significant instance out of nine. This finding was for females in the blocks scenario. Happy was the most frequently chosen emotion for their peer to have in response to this behavior. These girls that would respond in this way believe that expressing their sadness will make their aggressor happy. This finding can be related to the way girls (and boys) are socialized. It is more suitable for a young girl to cry, whereas a young boy may be told that crying is not acceptable response. Also, similarly to avoidance, children who tend to cry in stressful peer situations may not be fully witnessing their peer's emotional response because of outsiders intervening in reaction to their crying. The finding of happy as the most frequently chosen may be related to the customary consequences that follow crying in a classroom. Crying will usually draw attention from a teacher or other adult, and the aggressor may be aware of the impending consequences and either leave or try to fix the situation. As a result, young girls may find that crying can lead to a more positive result than aggressing or avoiding would and simply see the end result as leading to happy.

As expected, the analyses for children who chose to respond prosocially generated many significant results. Each of the analyses for the scenarios were significant overall,

for girls, and for boys. All but one of these analyses had happy being the most frequently chosen answer for peer emotional response. Many of these instances also had "okay" being chosen as the second most frequent. This finding supports the idea that children who behave prosocially have a strong understanding of how their behaviors can effect others' emotions and behaviors. The one occurrence in which happy was not the predominant answer (as chosen by boys for the blocks scenario), angry was the most likely selected. The effect sizes were small for this particular scenario. These children might understand that their peer may have been angry in the first part of the story where their block tower was knocked down, and expecting this anger to still be present in their peer.

Limitations and Directions for Future Studies

This study has several limitations that can be addressed in future research. First, the types of aggressive behaviors that the SCBE and MPAC examine tend to focus on overt and physical aggression. This is the primary form of aggression seen in young children. But, as mentioned, it has been found that children as young as preschool are already utilizing relational aggression fairly regularly. Including aspect measure of relational aggression in future studies either within the overall measure of anger/aggression, or as a separate measure, might be able to add more insight. Although these behaviors are more difficult to measure and quantify, studying relational aggression might add another piece towards understanding the differences between aggressive males and females at this age. Comparing this relational aggression data to the SCBE would

also allow for a closer look at the way teachers view children who are relationally aggressive and how aware teachers are of these kinds of behaviors. Research has found observational reports and teacher reports of relational aggression in preschool to be not related as consistently as those for physical aggression (Ostrov, Ries, Stauffacher, Godleski, & Mullins, 2008) and to vary greatly between observers (Ostrov, Crick, & Keating, 2005).

Also, the differences between proactive and reactive aggression might be present when comparing some of the variables from the CST and the SCBE. The SCBE does attempt to look at many of the child's behaviors, touching on both categories of aggressive behaviors. But, the CST is examining a child's response to a challenging situation that might provoke anger or aggression, not if this child is proactively aggressive or aggressive when unprovoked. Differentiating between these two types of aggressive behaviors in children might allow for research to find differences in their beliefs about emotions and their social behaviors. Future research on childhood aggression should examine the consistency and differences between reactive aggression (CST) and a measure of proactive or unprovoked aggression in preschoolers.

Concluding Remarks

The years spent in preschool are a time of growth and maturity of social skills and emotion knowledge. These formative years will shape social and behavioral outcomes throughout the school years and into adulthood. Therefore, it is important for researchers and teachers to understand the implications of early deficits in emotion knowledge and

behavior regulation. The results of this study can be used to inform and guide research on children's aggressive behaviors and how they compare to other children in the classroom. It is vital to distinguish between a lack of emotional knowledge and a lack of behavioral regulation in order to make classroom interventions as successful as possible.

It appears as though children who aggress are able to comprehend that their behaviors will cause negative emotions in their peers. It is important to examine why children choose to aggress in spite of being aware of emotional consequences and how to address the need for changing these behaviors. The function of gender is also central to tailoring lessons and social skill building techniques to provide the best outcomes for boys and girls. Gender roles can heavily influence socialization and behavioral expectations, changing not only the way aggressive boys and aggressive girls appear in the classroom, but the way they think about their aggressive behaviors. The more knowledge that is gathered on children at this age will allow for better social interactions, not only at this young age, but throughout the lifespan.

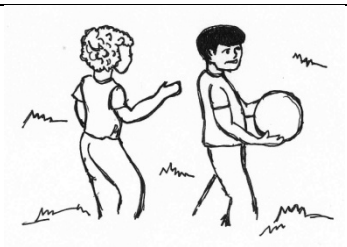
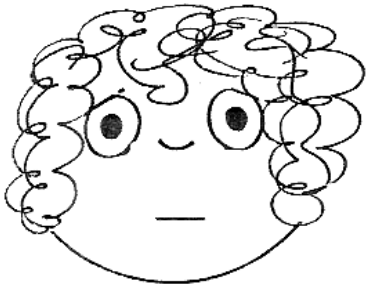
Scenario	Stimuli
1. Mary/John was building a very tall tower of blocks. Bobby knocked it down.	
2. Mary/John is having a good time playing in the sandbox when Bobby hits her/him.	
3. Mary/John was kicking a soccer ball. Bobby came and took the soccer ball.	

Figure 1. CST Scenarios

"Angry"

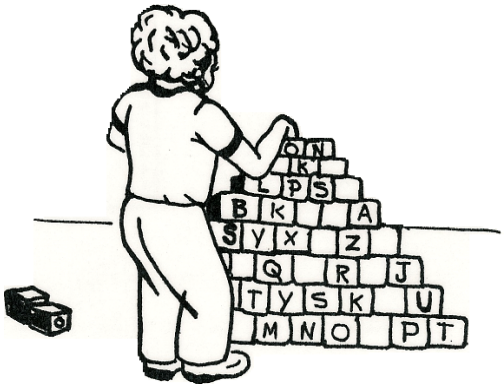


"Just ok"

"Sad"

"Happy"

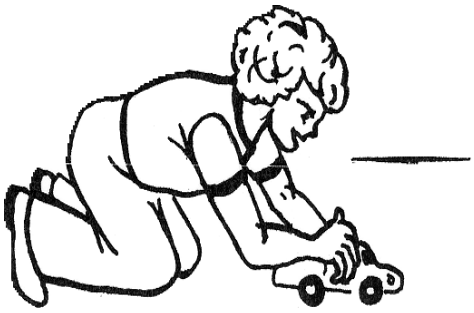
Figure 2. CST Emotional Response Choices



"Build another tower?"

"Hit him or yell at him?"

"Cry?"



"Go find something else to play with?"

Figure 3. CST Behavioral Response Choices

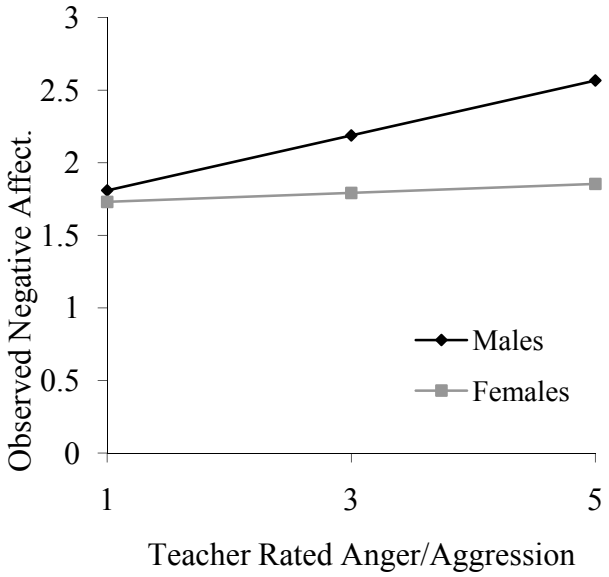


Figure 4. Gender and Negative Affect Interaction Predicting Anger/Aggression

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