

## Abstract

Title of thesis:       PRESCHOOLERS' EMOTIONAL UNDERSTANDING OF  
                             OTHERS WHO ARE ETHNICALLY THE SAME OR DIFFERENT

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According to Mayer and Salovey (1997), emotional understanding is the ability to “label emotions and recognize relations among the words and the emotions themselves”. While children at an early age are aware of racial differences, do children understand emotions differently for others of another ethnic group? This study considered the potential impact of race on understanding the emotions of others, by focusing on children’s accuracy in inferring story characters’ emotional response during emotion-eliciting situations. The cultural component involved the racial match between the participant and the story character. Study findings indicate that preschoolers understood others’ emotions similarly, regardless of racial background. Study results also examined children’s overall accuracy and assignment of emotional intensity. Similar to previous emotional understanding results, preschoolers found happy emotions the most easily identifiable and the most intense. In contrast, angry emotions were the most difficult to identify and the least intense emotion.

PRESCHOOLERS' EMOTIONAL UNDERSTANDING  
OF OTHERS WHO ARE ETHNICALLY THE SAME OR DIFFERENT

by

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## Chapter I - Introduction

### *Overview*

The importance of emotions has only recently become popular with both the research community and the general public. Both arenas have recognized the significance of emotional development, particularly in childhood. In light of well-publicized accounts of bullying and victimization, parents, schools, and society are placing great importance on children's social and emotional development. One key concept in children's emotional development is the ability to understand emotions. This ability to comprehend emotions involves linking together emotional signals (through facial expressions and body postures), emotional states, and contexts (Mayer & Salovey, 1997). This ability to understand emotions will mature and increase in complexity as children develop. From infancy, children's emotional development begins with the expression of emotions, as manifested through facial expressions (e.g., smiling) and behaviors (e.g., crying) (Field, Woodson, Greenberg, & Cohen, 1982). This period of time, toddlerhood, from 2 to 5 years of age, is generally a critical stage of development for multiple domains as emotions, language, cognitive abilities and motor skills. During this period, children's emotional development and understanding of emotions undergoes a rapid period of learning, since children make rapid gains in the ability to express themselves linguistically (Ridgeway, Waters, & Kuczaj, 1985). Children's understanding of emotions also develops from early linkages between emotions and facial expressions to recognizing and understanding emotion-eliciting situations to understanding mixed emotions (Hoffner & Hadzinski, 1989; Michalson & Lewis, 1985). The importance of understanding emotions cannot be underemphasized as it lays the foundation for more complex emotional skills as emotion regulation and empathy

(Lewis & Michalson, 1983). Because of this period of rapid growth, early childhood and the preschool years are an optimal time to study the foundation of children's understanding of emotions.

As emotional understanding and the broader concept of emotional development are relatively new areas of research, much research is needed to clearly understand the role of emotional understanding and its developmental trajectory. Recent research has begun to emphasize the importance of emotional understanding, with its positive links to social functioning (Arsenio & Cooperman, 1996; Diamond, 2001; Hughes, Dunn, & White, 1998; Philippot & Feldman, 1990; Southam-Gerow & Kendall, 2000) and academic achievement (Hughes et al., 1998; Izard et al., 2001). Increased understanding of emotions has been associated with increased social competence as defined by peer liking (Arsenio & Cooperman, 1996). In addition, increased understanding of emotions appears to facilitate greater acceptance and exposure to interpersonal differences, such as physical disabilities (Diamond, 2001). This link between emotional understanding and overt behaviors has important implications for children's social and emotional development, particularly when considering factors of interpersonal differences. One such important factor to consider in such social situations is the racial and ethnic background of those involved in the social interaction.

When considering emotional understanding, the role of culture and racial background is an important issue to address. As other group differences (e.g., gender) have been found in emotional processing and development (Kring & Gordon, 1998), it is important to explore the role of emotions in the context of culture. Differences in specific processes of emotional understanding (i.e., emotional labeling and perception) can be accounted for by culture (Gosselin & Larocque, 2000; Matsumoto, 1993).

Children, 5-10 years of age, already have differential biases in ascribing particular emotions to particular ethnic groups (Gosselin & Larocque, 2000), and additional cultural factors as language have been known to affect emotion perception and labeling in adults (Matsumoto & Assar, 1992). Given that cultural differences may impact emotional skills, it is important to consider what role and to what extent culture or ethnicity may impact children's overall understanding of emotions. While there is a dearth of research in this area of culture and emotional understanding, early research indicates that culture does appear to influence this concept, particularly in thematic differences of reported emotional situations (Harris et al., 1987). Other cultural differences (e.g., between American and Nepalese cultures) have been exhibited in children's understanding of appropriate responses in a given situation or context with particular individuals (Cole & Tamang, 1998; Joshi & MacLean, 1994; Matsumoto, 1990). Children's overall understanding of emotions may adapt according to the situation and the individuals involved, particularly since different cultures may emphasize specific emotional responses and behaviors. Children's emotional understanding should be considered in relation to the situation, context and social relationships.

Emotional understanding must be considered in relation to ethnic and cultural differences. As the understanding of emotions provides children and adults a framework for emotional, cognitive and behavioral responses, research needs to address whether or not there are cultural differences in the understanding of emotions and to what extent culture plays in its development over time. In particular, questions must be raised regarding children's understanding of the emotions of other individuals, who are of a different ethnic or cultural background. Are there fundamental differences in the way preschoolers understand others' emotions, when considering ethnic background?

Research in this area may have important implications in understanding underlying emotional processes as well as its influence on behavior. As Diamond (2001) has demonstrated that emotional understanding was related to greater acceptance and contact with students with disabilities, a parallel supposition may propose that those with greater emotional understanding would also have greater acceptance and contact with other children of varying backgrounds (e.g., ethnic and cultural differences). This in turn may have implications for children's biases or tendencies to act prejudicially. Therefore, research in exploring the role of culture on emotional understanding may have important implications for not only understanding emotional development, but for social improvements through the development of socioemotional programs.

#### *Statement of Problem*

Since the preschool years are a critical time for development, it is an optimal period to understand the foundational skills of emotional understanding. In addition, the early cultural influences may be examined in children's understanding of others' emotions. It is important to differentiate cultural influences by developmental periods, in order to distinguish the degree of influence and whether or not unique cultural factors may be more influential at particular stages of development. While children at an early age are already aware of racial differences, do cultural factors impact children's fundamental understanding of emotions? Do children understand emotions differently for different ethnic groups? Furthermore, this study will attempt to explore the use of emotion intensity in relation to emotional understanding. Previous conceptions of emotional understanding by Denham (1998) or Harris and Saarni (1991) do not appear to account for the intensity of emotions when understanding emotions. However,

schemas of understanding emotions involve linking an emotional state with a context and emotional signals. Emotional states are not dichotomous categories of emotions, but include a continuum of emotions ranging in intensity. Therefore, in order to account for the appropriate emotions for a particular context, it is also important to consider the degree or intensity of emotional responses. Significant cultural differences may exist within this domain, as cultural differences appear to exist for perceived intensity of emotional expression. Furthermore, cultural differences may also exist in the content themes when understanding emotions, particularly since Harris et al. (1987) demonstrated thematic cross-national differences in children's understanding of emotions.

As previous research has generally utilized cross-national differences in emotional development and understanding, one valuable component of the proposed study is that it considers ethnic groups particular to the context of the United States. Intra-national ethnic groups have not been particularly utilized when researching emotional development and cultural differences. Minorities within this country are in the unique position of holding specific ethnic values in addition to the broader cultural values of American society. As ethnic groups within this country cannot be equated with the nation of their ethnic background, it is imperative that cultural and ethnic research also involve minority groups within this country.

In order to address some of these unanswered questions, the purpose of this study is to investigate the early role of culture (e.g., intra-U.S. ethnic groups) on emotional understanding in a preschool population. In order to carry out this study, emotional understanding will focus on a component of Denham's conception of emotional understanding: the ability to identify emotion-eliciting situations, by inferring

the story characters' emotional response to the situation. This understanding of emotion eliciting situations is important for the continued development and increased accuracy in understanding others' emotion (Reichenbach & Masters, 1983), by progressing beyond solely relying on facial expressions in order to understand others' emotions (Hoffner & Hadzinski, 1989). Additional components of this study will explore cultural differences in emotional intensity for understanding emotions.

### *Research Questions*

In this study, the following research questions will be proposed:

1) Ethnic differences in emotional understanding may be expressed through differences between understanding emotions for those who are of the same ethnic background (i.e., same match group) and those who are not of the same ethnic background (i.e., different match group). Will participants' understanding of emotions in a given situation differ with story characters are of the same ethnic background to the participant, when compared to other story characters who are not of the same ethnic background?

2) Additional ethnic differences may exist when children understand particular emotions differently for different ethnic groups. For example, children may have more difficulty with ascribing the emotion of sadness for a character that is of another ethnic background to the participant (i.e., different match group) than for one who is of the same background (i.e., same match group). Does the match of the story character's ethnicity to the participant make a difference in children's ability to understand particular emotions in a given situation?

3) Ethnic differences may exist in how children ascribe the intensity of story characters' emotions. Children may assign more or less emotional intensity, based upon the story character's ethnic membership. Is there a general pattern for emotional intensity when comparing story characters of the same ethnic background to those of another ethnic background? For example, do participants subscribe more or less emotional intensity to story characters of the same ethnic background versus those of a different ethnic background?

4) Furthermore, are there specific ethnic differences in ascribed emotional intensity particular to the emotion itself? Are particular emotions perceived as being more or less intense when looking at story characters that are of the same ethnicity as the participant versus story characters of a different ethnicity? Specifically, will the different emotions vary in their ascribed intensity based upon the ethnic match (i.e., same or different) of the participant to the story character?

## Chapter II – Literature Review

### *Introduction to Emotional Understanding and Its Roots in Emotional Development*

The value of emotional understanding has only recently been recognized, since the public have become increasingly concerned about children's social and emotional development. Emotional understanding is a key factor in children's emotional development and functioning. By serving as a link between the input of emotional stimuli and the consequent emotional expression or behavior, emotional understanding may serve as a mediating cognitive structure (Michalson & Lewis, 1985). In order to fully understand emotional understanding, a thorough review must include this concept in relation to emotional development.

### *Emotional Development and Functioning*

In the past decade, children's emotional development has quickly caught the interest of parents, teachers, educators, and researchers. Although a key focus of development in childhood is academic development, there has been a heightened interest in the study of children's emotional and social development because of its long-term implications and consequences for adulthood. When the developmental milestones for emotional development are not adequately reached, children may become at risk at any time for emotional and behavioral problems, childhood and/or adult psychopathology (Cole, Zahn-Waxler, Fox, Usher, & Welsh, 1996; Zahn-Waxler, Iannotti, Cummings, & Denham, 1990). Integral to every aspect of life in both childhood and adulthood, emotional development and maturity is essential for individuals to be functioning adequately in any domain of life activity. In fact, in many professional arenas such as psychology and medicine, knowledge alone no longer suffices. These

fields of study have increasingly focused on better interpersonal and emotional skills as being empathic and compassionate (Carrothers, Gregory, & Gallagher, 2000).

*Emotional Intelligence.* Associated with the increasing emphasis on emotional and social development is the widespread interest in the concept of emotional intelligence. This is a complex construct representing an array of emotional skills, which has been thought to be a better predictor of success than any other construct, including IQ or academic intelligence (Goleman, 1995). This concept has sparked an outbreak of debate and thought, with many trying to define and operationalize emotional intelligence (Davies, Stankov, & Roberts, 1998; Goleman, 1995, Salovey & Mayer, 1990). According to Mayer and Salovey (1997, p. 10), emotional intelligence can be defined as a range of abilities that include the “ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth”. Without mastery of these key components of emotional intelligence, difficulties may develop in intrapersonal, social, academic, or professional domains (Denham, McKinley, Couchoud, & Holt, 1990; Garner & Estep, 2001; Hubbard & Coie, 1994; Izard et al., 2001).

As emotional intelligence covers a broad list of abilities, conducting research on this topic is complex and multifaceted. Because of the comprehensive nature of emotional intelligence, research is generally focused on its specific components. According to Mayer and Salovey (1997), four broad key components of emotional intelligence are: a) perception, assessment, and expression of emotion; b) facilitation of cognitive skills through emotions; c) understanding emotional knowledge; and d) regulation of emotions. As this concept of emotional intelligence has only recently

gained popularity, research in this area has been incomplete. At present, research in these domains of emotional intelligence has been heavily focused on adults and school-age children, with only some attention given to the preschool-age population. As this age group is an important period of development for foundational skills, special attention and research needs to be given to this special age group concerning their emotional intelligence and development.

Although research in emotional intelligence during the preschool age has been lacking, the importance of emotional intelligence can still be emphasized by the findings with older children and adults. The various abilities within the domain of emotional intelligence are key skills that are utilized to facilitate successful interpersonal interactions. Emotional competence and proficiency of these various abilities is necessary for children's ability to interact and form relationships with others (Saarni, 1990). Saarni (1990, p. 115) emphasizes the importance of how children "respond emotionally, yet simultaneously and strategically apply their knowledge about emotions and their expression to relationship with others, so that they can negotiate interpersonal exchanges and regulate their emotional experiences as well". If one cannot accurately perceive others' emotions, then that person would not be able to appropriately respond or connect with others. In relation to perception of emotions, one must also appropriately express emotions for reception by others. Regulation of emotions is also a critical component for social interactions. If someone is unable to control impulsive responses and regulate their behavior, then social interactions would be negatively impacted. Use of these developing emotional skills within social processes contributes to increasing success when interacting with peers (Denham et al., 1990). Without a foundational understanding of these basic emotional abilities of emotional intelligence,

childhood and adulthood can be fraught with difficulties in adjustment and development.

*Difficulties Associated with Deficits in Emotional Functioning.* Difficulties with emotional intelligence abilities, such as the perception of emotion, have been associated with clinical symptoms and psychopathology. In childhood, difficulties with accuracy in the identification of emotions within oneself and others in various contexts were correlated with increased symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD) (Norvilitis, Casey, Brooklier, & Bonello, 2000; Singh et al., 1998), and autism (Ozonoff, Pennington, & Rogers, 1990). Other difficulties with emotion perception such as biased perceptions have also been associated with the social deficiencies of children with conduct problems (Cadesky, Mota, & Schachar, 2000). While more serious deficits in emotion perception have been associated with child psychopathology, children with even some form of difficulty in perceiving the emotions of themselves and others may be at risk for future difficulties as an adult. In adulthood, difficulties with emotion perception have been associated with depression (Feinberg, Rifkin, Schaffer, & Walker, 1986), obsessive-compulsive disorder (Wexler & Goodman, 1991), and social competency difficulties for individuals with schizophrenia (Mueser et al., 1996; Feinberg et al., 1986).

While difficulties with emotional perception alone may not lead directly to child or adult psychopathology, other underdeveloped emotional skills, such as understanding emotions, may signify at minimum adjustment difficulties or more serious clinical symptoms. Preliminary studies indicate that children with anxiety had more difficulty understanding the complexities of emotions, as hiding and changing emotions (Southam-Gerow & Kendall, 2000). Poor understanding of emotions have also

been associated with general adjustment difficulties of being disruptive and “hard-to-manage”, with higher rates of antisocial behavior and negative expression (Hughes et al., 1998; Hughes, White, Sharpen & Dunn, 2000). General difficulties with understanding emotions can be further expanded to common social difficulties as being rated poorly by peers (Arsenio & Cooperman, 1996). In addition, emotional abilities as emotion regulation (as noted through emotional expressiveness) have been associated with physiological symptoms that had implications for their level of emotional and behavioral states (Cole et al., 1996). Preschoolers who had difficulty in regulating their emotions had more externalizing symptoms than those children who were able to modulate their emotions (Cole et al., 1996). These children who were considered to be inexpressive displayed more depressed and anxious symptoms than the other children (Cole et al., 1996). As these difficulties with emotional skills emerge at such an early age, children cannot escape unscathed in terms of its implications for later emotional development and functioning. Deficits in the foundational skill of emotion regulation can impede the development of more advanced social and emotional abilities as empathy and social information processing, and precipitate the presence of negative social behaviors, as childhood bullying (Arsenio & Lemerise, 2001). Therefore, these implications emphasize the importance of these emotional abilities, indicating that a range of difficulties from mild to more serious impairment of emotional abilities can impact development and functioning from childhood to adulthood.

*Benefits Associated with Mastery of Emotional Skills.* While difficulties with emotional intelligence abilities have been associated with negative outcomes, mastery of these same abilities is also associated with positive consequences. Throughout early and middle childhood, children’s social relationships and competence with peers and adults

are strongly associated with the following emotional abilities: emotional perception (Custrini & Feldman, 1989; Field & Walden, 1982; Philippot & Feldman, 1990; Walden & Field, 1990), understanding (e.g., emotional role taking and knowledge of prosocial display rules) (Garner, 1996), emotionality or emotional intensity experience (Eisenberg & Fabes, 1995; Eisenberg et al., 1993), regulation (Eisenberg & Fabes, 1995; Eisenberg et al., 1993; McDowell, O'Neil, & Parke, 2000), and expressiveness (Field & Walden, 1982). In general, children who are better able to perceive others' emotions accurately are rated as having better social skills (Philippot & Feldman, 1990). For those children who have some difficulty with emotion perception and were considered of lower sociometric status, the context or situation could enhance their ability to perceive emotions (Edwards, Manstead & MacDonald, 1984). Edwards et al. (1984) found for these children, situations that involved the perception of adult emotions were more accurate than those which involved children. Therefore, even when children have some difficulties with emotion perception, there may lie individual strengths within this emotional skill.

Within the realm of emotional abilities, gender differences indicate differential benefits. Eisenberg et al. (1993) found that for boys, displays of low emotional intensity and the ability to seek social support were associated with higher peer status and social skills. For girls, McDowell et al. (2000) found that social competence with peers and adults was related to the emotional ability of effectively utilizing appropriate emotional display rules and coping strategies to manage negative feelings. Additional gender differences were also found, such that skills with emotional perception and expression indicated better social competence for only girls rather than boys (Custrini & Feldman,

1989). Although there is a dearth of research in this area, it seems that gender is an important factor when considering the differential benefits of emotional skills.

Despite gender differences in emotional skills as emotional perception, expression and experience, the importance of emotional abilities, such as understanding emotions, should not be ignored or underemphasized. The ability to understand an individual's own feelings as well as the feelings of other children, siblings and other adults is related to social competence and prosocial behaviors (Denham, 1986; Diamond, 2001; Garner, Jones & Miner, 1994; Shields et al., 2001). Diamond (2001) found that children with a higher understanding of emotions had more social contact with and acceptance of classmates with disabilities. Diamond (2001) suggested that these findings indicated that these children with greater emotional understanding had a higher tolerance and ability to accept differences. Although it is difficult to indicate causal relationships among social acceptance, contact and emotional understanding, the social and emotional benefits in this context cannot be ignored. This line of research could potentially have significant implications in tying emotional understanding with other human differences, as ethnic and racial differences.

In addition to the benefit of increased positive social interactions, the ability of understanding emotions has also been associated with higher academic achievement (Hughes et al., 1998; Izard et al., 2001) and preschooler's overall school adjustment (Shields et al., 2001). This positive consequence of higher academic achievement has also been associated with other emotional skills as emotion perception (Nowicki & Duke, 1992). The relationship between emotional skills and academic achievement may be mediated by children's cognitive abilities. Denham et al. (1994) found that children with a better understanding of emotions also had better cognitive expressive-language

abilities. Although there is a relationship among academic, cognitive and emotional skills, it is important to continue to focus on the importance of emotional skills. Even after controlling for children's linguistic and attentional control, children's knowledge of emotions continued to predict reports of social difficulty (Schultz, Izard, Ackerman & Youngstrom, 2001). As these emotional skills appear to be valuable resources for the adjustment, the implications regarding the abilities of emotional intelligence are too important to neglect. Additional research is needed in the initial stages of development, particularly during the period of toddlerhood (19-36 months) and preschool (37-60 months), in order to better understand how emotional abilities are established and its relationship with other emotional and cognitive abilities, and academic achievement.

*Emotional Development in Early Childhood.* Development during the beginning stages of childhood from ages 2 through 5 years of age is a key period for not only emotional development, but also a critical time for language, cognitive and motor growth. Children rapidly begin to develop new abilities and skills that facilitate interactions with peers and adults. The emotional experience is an integral part of children's development, impacting all aspects of their lives. Although developmental periods will delineate the complexity of the emotional experience, infants already begin to experience the basic components of the emotional experience. Infants can begin to develop emotional responses, through expressive behaviors as smiling. Infants can already begin to imitate adult facial expressions within the first few days of life (Field et al., 1982), and can spontaneously produce expressions of happiness, sadness and anger (Malatesta, Culver, Tesman, & Shepard., 1989). Although it is not clear whether or not emotional experiences are associated with the emotional expression during early infancy (0-6 months), it appears that by mid-infancy (7-18 months) emotional expressions are

associated with the experience of emotion. Parrot and Gleitman (1989) found that 6-8 month old infants displayed increased emotional expressions of smiling, laughter and eyebrow in peek-a-boo games with more familiar individuals, indicating a relationship among certain causal events and emotional experiences and expressed behaviors.

Emotional expression may also involve gender differences in early childhood, as Wagner, MacDonald and Manstead (1986) found that female adult emotional expressions were decoded more accurately by both males and females over male emotional expressions. In addition to facial expressions, other methods of nonverbal communication that infants and children can begin to develop are visual responses, body movement, interpersonal distance, and paralanguage (Allen, 1981). Once children begin to develop their linguistic skills, communication of emotions is further enhanced with the expression of thoughts, feelings and individual states.

During the stage of language acquisition at around age 2, toddlers begin to learn the words needed to express the focus of their emotions or thoughts, while still continuing to express the nature and intensity of those feelings through expressive facial and vocal behaviors (Bloom & Beckwith, 1986). When toddlers are beginning to acquire these language skills, initial first words uttered at about 13 months of ages are considered to be neutral in affect, since these words are not accompanied by either positive or negative emotional expressions such as smiling or laughing (Bloom & Beckwith, 1986). By about two years of age, children are able to express their own emotional states through word meanings (Smiley & Huttenlocher, 1989). Furthermore, more than half of children of this age know and are able to use positive and negative emotion terms as happy, sad, afraid and mad (Ridgeway et al., 1985). Bretherton and Beeghly (1982) found that emotion acquisition at around 28 months of age involved a

ordinal trend with negative emotions of “mad” and “scared” followed by positive emotions of “having fun” and “happy” and then by “sad”. This period from age 2 to 3 years of age is a significant time in which there is a dramatic increase in children’s vocabulary of emotional words (Ridgeway et al., 1985). The use of early language skills as an expression of their feelings is also balanced by children’s continued reliance on nonverbal behaviors as an indicator of emotional expression (Bloom & Beckwith, 1986). In addition to the development of expressing one’s own internal states by age 2, children will also begin to develop the ability to infer and linguistically express other’s internal states and observable behaviors at around 2½ to 3 years of age (Smiley & Huttenlocher, 1989). While children tend to speak about their own emotional states before those of others, there appears to be minimal differences between these two perspectives, as Bretherton and Beeghly (1982) have found that 28-month old children utilize the majority of internal emotion words to refer to both themselves and others. This ability illustrates that this period of 2 to 3 years of age is critical for the development of affect language.

As children also develop the ability to express linguistically and nonverbally their own feelings and thoughts, they are also acquiring the ability to perceive other’s expressions of emotions. This ability to perceive other’s feelings and thoughts are necessary for effective social interactions. Most children will have developed this decoding ability between 3 to 5 years of age, with children judging happy and sad expressions more accurately than surprised and angry expressions (Walden & Field, 1982; Field & Walden, 1982). Similar results were found by Philippot and Feldman (1990), whereby happiness was the most easily recognized emotion. Interestingly, gender differences were found for emotion perception with females at 3-4 years of age

appearing to develop this skill before males of 4-5 years of age (Philippot & Feldman, 1990). These differences may also correspond to other gender discrepancies between the relationship of emotional expression and self-report. Olthof and Engelberts-Vaske (1997) found that for 4-6 year old girls, behavioral expressions of emotions were highly associated with their ability to acknowledge their own internal states through self-reports. Further gender differences may also exist during childhood and through adulthood, as female adults were found to perceive emotions better with female targets than male targets (Wagner et al., 1986).

As children begin to recognize emotions, they begin to label these emotions and perceive relationships among those labels, creating a basic understanding of emotions (Mayer & Salovey, 1997). When comparing the ability to comprehend emotions with the utilization of words to describe feelings, young children first develop the ability to comprehend the emotional concepts before being able to produce the emotional language (Ridgeway, 1986). This organization and labeling of emotions even aids in the development of other emotional skills. Walden and Field (1982) found that the use of emotion categories facilitated greater accuracy in the emotion perception of preschoolers. As children begin to develop the necessary linguistic and cognitive skills, knowledge of emotions and nonverbal emotional expression and perception begin to integrate.

The skills of understanding and perceiving basic emotions will become the foundation for more complex emotional abilities, such as emotion regulation and empathy. As early childhood is a critical period, young children's emotional development involves the decrease of emotional intensity and impulsivity, while increasing their ability to regulate their emotions (Murphy, Eisenberg, & Fabes, 1999).

The regulation of emotions can be observed in two-year olds, in which the most common strategy was distracting one's self through actively engaging in alternate activities with the assistance of an adult (Grolnick, Bridges, & Connell, 1996). By 3 years of age, other social partners and particular contexts play an important role in the type and intensity of emotions expressed (Malatesta et al., 1989). As children begin socialized to a broader network of individuals, children begin to learn how to express emotions in culturally appropriate ways.

*Sources of Emotional Development.* An integral part of a child's emotional development is recognizing the important factors that allow a child to acquire, develop and practice emotional skills. Contributions to emotional development involve a variety of sources, including the child or external factors as the family or peers (Ashiabi, 2000; Dunn, Brown & Beardsall, 1991; Garner et al., 1994). Children themselves are born with particular biological characteristics, whereby each child will differ in a variety of cognitive, emotional and physical abilities. Therefore, children's natural contributions, as temperament and traits, will play a role in their emotional functioning (Kean, 1994). In addition to individual contributions, children's emotional life is greatly impacted by interpersonal factors. Through social interactions, children learn appropriate behaviors and emotions from socializing agents as family members and peers (Ashiabi, 2000; Dunn et al., 1991; Garner et al., 1994).

In such contexts, children interact with their family and peers to gain the experience and knowledge necessary for their emotional development. In the initial stages of development, children predominantly interact with their primary caregivers. This relationship provides children with the "training ground for emotional skills", whereby acquired skills can be later transferred into relationships with other adults and

peers (Ashiabi, 2000). Familial factors as maternal socialization practices of emotions (e.g., expression of positive and negative emotions in general and focus on the child) and family conflict were significantly related to an increase in children's knowledge about angry and sad situations (Garner et al., 1994). A generally negative affective environment, as seen by the family's general emotional expressions, the level of marital conflict or the maternal symptoms of depression, also were related to children's difficulty in understanding emotions and negotiating in times of conflict (Dunn & Brown, 1994; Greig & Howe, 2001; Nixon & Watson, 2001). Maternal anger and discouragement of emotional expression were significant predictors for children's ability to recognize angry situations (Garner et al., 1994). Maternal expressiveness of emotions was also related with children's own ability to regulate emotions, which in turn mediated the children's externalizing problems and social and emotional competence (Eisenberg et al., 2001; Denham & Grout, 1993). In addition, Denham and Grout (1993) found that children's emotional competence was related to maternal reactions to children's emotional expression and the affective environment determined by the mothers' emotional traits. Lack of engagement in emotional understanding discussions by maltreating mothers were related to their children's decreased understanding of emotions (Shipman & Zeman, 1999). Therefore, the principal adults in a child's life act as models for emotional learning and development.

When considering the role of family members in children's emotional development, Dunn et al. (1991) found that conversations about emotions between 3-year olds and family members (i.e., mothers and siblings) had important implications for their later ability to recognize emotions. Furthermore, mothers were a primary source of emotional conversations, talking about feelings more frequently than the children's

siblings and including feelings that involved the perspective of the child and others (Dunn et al., 1991). This verbal engagement about feelings and thoughts may encourage processing and reflection, even for very young children. Furthermore, as emotion conversations between children and their mothers or siblings differ depending on the gender of the child (Dunn, Bretherton & Munn, 1987), exposure to this type of emotional stimuli may potentially explain the presence of gender differences in the levels of negative expression (Davis, 1995). The context and sources of emotional development, as the mother, play a key role in impacting children's emotional and social development.

Research involving sources that influence emotional competence in early childhood is clearly focused primarily on the maternal role, rather than on other roles as the father, other adult caregivers (e.g., teachers) or family members as siblings. These other influences cannot be ignored, as there are preliminary indications that other important figures help to shape a child's emotional competence. In particular, Shields et al. (2001) found that teachers appeared to help regulate preschoolers' emotional experiences, and thus influence their emotional competence. This was particularly true for older preschoolers at risk (Shields et al., 2001). In addition, the role of siblings should not be disregarded in terms of their influence of children's emotional development. Dunn, Brown and Maguire (1995) found that older siblings also play a role in children's moral sensibility and understanding of emotions in situations of misbehavior. Dunn, Brown and Maguire also found that early friendly relationships with sibling were related to later more mature moral understanding of those 6-year olds compared to those with siblings who were not so friendly.

In contrast to relationships with primary caregivers, peer interactions allow children to practice and expand on emotional and social skills already acquired (Ashiabi,

2000). Although there has been much research correlating mastery of emotional skills with increased social skills and status (Cassidy, Parke, Butkovsky, & Braungart, 1992; Denham et al., 1990; Garner & Estep, 2001), there is little research that looks at the peer context as an influencing source of continued emotional development. Much research looking into the sources of emotional development has focused on maternal contributions (Ashiabi, 2000). However, this area of research cannot be ignored as social and emotional development continues throughout childhood. As the context of peers would more than likely have a strong influence in their emotional development, it would be easy to imagine that further growth in emotional abilities could depend upon variables in the peer context, as the general affective environment or level of expression. Related studies focusing on the emotional skills in the peer context indicate the importance of this particular context in developing emotional skills. Miller and Olson (1999) found that even in the course of one school year, preschoolers' emotional expressiveness changed during peer conflicts. Miller and Olson (1999) found that the emotional tone of peer conflicts were more negative at the end of the school year when compared to the beginning of the school year. Furthermore, children learned to adapt their emotional expressiveness by mirroring each others' emotional displays during conflicts (Miller & Olson, 1999). Children's adaptation of emotional expression and regulation in peer situations is also supported by Underwood (1997), who found that context plays an important role in emotional displays. In contrast to previous research that indicates increased emotional control and regulation with adults, older children in middle childhood reported that they would express more anger and disappointment than younger children in peer situations (Underwood, 1997). They learn that there are different social consequences for the expression of different emotions, and they expect

positive peer reactions to expressed positive emotion and negative peer reactions to increasing intensity of expressed negative emotions (Underwood, 1997). Therefore, as children learn different emotional rules for different emotions and situations, it would not be unexpected that they learn these expectations from their peers. The peer context cannot be ignored as an important source of emotional development.

### *Emotional Understanding*

*Overview and Early Background of Emotional Understanding.* Because of the complexity of emotional intelligence and its interaction with social competence, emotional understanding, a specific domain of emotional intelligence, has been targeted as the focus of this present study. As a whole, research in the area of child emotional functioning has been rather inadequate and sparse. However, the area of emotional understanding indicates a significant role in children's development and functioning. Emotional knowledge or understanding entails the ability to "label emotions and recognize relations among the words and the emotions themselves" (Mayer & Salovey, 1997, p. 13). Emotional understanding has been found to have positive relationships with social competence, likability (Denham et al., 1990; Hubbard & Coie, 1994) and academic achievement, with deficits in this area contributing to behavioral and learning problems (Hughes et al., 1998; Izard et al., 2001). The understanding of emotions also has been found to facilitate social cognitions regarding emotions and behaviors that are important for peer interactions (Denham & Bouril, 1994). These social cognitions mediate in turn social competence, allowing children to first take in the given experience, then consider choices based upon social cognition and then finally act upon their chosen course of action (Denham & Bouril, 1994). As emotional understanding has important implications for the social, emotional and academic functioning of children, it

is important to consider the various areas that compose of the ability to understand emotions. Although this area of study is relatively new, several definitions regarding emotional understanding have been proposed (Denham, 1998; Mayer & Salovey, 1997; Nannis, 1988).

Early conceptions of emotional understanding were introduced by Nannis (1988), who emphasizes a cognitive-developmental view of this concept. She delineates 4 broad categories of emotional understanding that follow a developmental trajectory, where children first develop some knowledge of feelings. This category is concerned with children's understanding about their own and others' feelings and some general ideas about how feelings work (e.g., intensity of feelings can vary) (Nannis, 1988). Another aspect of Nannis' conception of emotional understanding involves the development of children's ability to understand that one can experience multiple feelings and thus experience ambivalence. These aspects of emotional understanding are also linked with children's understanding regarding the control over emotional expression (i.e., emotion regulation), which includes the ability to understand social conventions about emotional expression and the use of strategies to manipulate their expressions (Nannis, 1988). The fourth area of emotional understanding according to Nannis involves children's understanding about the causality of feelings, whereby children are able to understand how feelings develop through recognizing precipitating events to emotional experiences for themselves and others and also understand how feelings can dissipate. With these four categories, Nannis provides a broad explanation to the domain of emotional understanding.

In comparison to Nannis (1988), Mayer and Salovey (1997) have also provided a definition to emotional understanding that is couched in the larger domain of emotional

intelligence. Emotional understanding is defined as the “ability to understand emotions and to use emotional knowledge” (Mayer & Salovey, 1997, p. 13). Mayer and Salovey provide a descriptive definition of this concept, whereby children learn that recognized emotions are labeled and thus organized along a continuum of emotions and intensity. According to Mayer and Salovey, children learn such relationships between feelings and situations through parents who are the primary source for emotional reasoning. Children will also begin to understand that multiple and contradictory feelings may exist, and the understanding of such emotions first begins in childhood and continues throughout the lifespan (Mayer & Salovey, 1997). Similar to Nannis’ previously mentioned conception, Mayer and Salovey also provide a general description of emotional understanding. With much overlap, both have recognized that the fundamental nature of emotional understanding involves a basic understanding of singular and multiple emotions. As both definitions provide a broad definition of emotional understanding, another perspective on emotional understanding that is more comprehensive will be considered.

*Denham’s Concept of Emotional Understanding (1998)*. In comparison to the concept of emotional understanding according to Nannis (1988) and Mayer and Salovey (1997), Denham (1998) provides a comprehensive perspective, delineating nine specific areas within the domain of emotional understanding. While there is some overlap of key areas between these definitions, Denham provides a thorough examination of emotional understanding that relates to general emotional and social functioning. According to Denham, emotional understanding is comprised of the following nine key areas: a) labeling emotional expressions, both verbally and nonverbally; b) identifying emotion-eliciting situations; c) inferring the causes of emotion-eliciting situations, as well as the

consequences of specific emotional responses; d) using emotion language to describe their own emotional experiences and to clarify those of others; e) recognizing that others' emotional experience can differ from their own; f) becoming aware of emotion regulation strategies; g) beginning to develop a knowledge of emotion display rules; h) beginning to develop a knowledge of how more than one emotion may be felt simultaneously, even when these emotions conflict or are ambivalent; and i) beginning to understand complex social and self-conscious emotions (e.g., guilt).

*Children's Development of Emotional Understanding.* Although there are variations of the concept of emotional understanding, there is some consensus regarding the development of emotional understanding in childhood. Although there is much overlap between the concepts of emotional understanding and emotional development, the development of emotional understanding is not synonymous with that of emotional development, since emotional understanding is focused on "how the child organizes his or her emotional system to act and react to the world" with the fundamental belief that "cognitive development serves as one organizer of emotion" (Nannis, 1988). Building upon the cognitive-developmental theories proposed by Piaget, Cicchetti and Pogge-Hesse, Sroufe and Cowan (Nannis, 1988), children's understanding of their emotional worlds will change and develop along with their cognitive abilities.

The development of children's emotional understanding is established with their knowledge of emotional expressions during the first few years of life (Denham, 1998). In order to demonstrate basic understanding of emotions, children must first be able to discriminate between emotions and name basic emotional expressions through labeling (Denham, 1998). This ability to recognize and label emotional expressions is reliably established by the preschool years, as extensive research has examined preschooler's

recognition of facial expressions through photographs or pictures or “live” presentations (Camras & Allison, 1985; Denham & Couchoud, 1990; Felleman, Barden, Carlson, Rosenberg, & Master, 1983; Field & Walden, 1982). In the sequence of emotion recognition and labeling, children appear to be able to first distinguish between happy and not happy, and then recognizing sad expressions with greater skill than surprised or angry emotions (Bullock & Russell, 1985; Camras & Allison, 1985; Philippot & Feldman, 1990; Walden & Field, 1982). In discriminating between categories of happy and not happy, Cunningham and Odom (1986) discovered that children relied on mouth expressions as the most salient feature, and later learning for more specific negative emotions (i.e., sadness, anger, and fear) involved the eye region. Within the preschool years of 2 to 5 years of age, the accuracy of this skill to verbally and nonverbally recognize and label emotional expressions increases dramatically whether the children are asked to nonverbally or verbally express their understanding (Denham & Couchoud, 1990; Michalson & Lewis, 1985).

While the task of expressive (i.e., verbal identification) or receptive (i.e., nonverbal) recognition of emotions will vary with age, receptive identification of emotions will initially exceed that of verbal expression (Denham & Couchoud, 1990; Michalson & Lewis, 1985). The added task of requiring the children to provide an emotional label through their own verbal initiative requires a memory component of retrieving an emotional label from memory. From 2 years of age, children have some but few verbal labels of emotional expression, utilizing only happy and sad labels (Michalson & Lewis, 1985). However, there is a dramatic increase in children’s emotional vocabulary between 2 to 3 years of age (Ridgeway et al., 1985), allowing children the additional vocabulary for emotional expression. At around age 4, over 50%

of the children could verbally express labels for happy, sad and angry emotions, and by age 5, 80% of children had acquired the ability to apply the happiness label, all had labels for sad and angry, and relatively few had labels for surprise, fear and disgust (Michalson & Lewis, 1985). This illustrates the difference between the ability to recognize and express emotions, since emotion recognition through nonverbal labeling increases for all age groups as 20% of 2 and 3-year olds and 40-80% of 4 and 5-year olds showed additional recognition of fear and disgust (Michalson & Lewis, 1985). As children suddenly acquire the emotional vocabulary between 2 and 3 years of age, Harris et al. (1987) proposes that the understanding of emotional labels is a process of sudden or all-or-nothing approach to the acquisition of emotional understanding rather than a partial or gradual understanding of emotions into more complex emotions. The ability of labeling emotions, whether it be nonverbally or verbally, is a multifaceted process affected by children's cognitive abilities. During this sensitive time period for emotional and cognitive development, children concurrently beginning to understand their own and others' emotions. Borke (1971) has found that children as young as 3 years of age are able to recognize the emotions of others and the situations which evoke those emotional responses. With the naturalistic observation of preschoolers' emotion language, Wellman, Harris, Banerjee and Sinclair (1995) claim that preschoolers 2-4 years of age are capable of using emotions to refer to states, situations or behaviours in the past, present or future tenses for themselves and for others.

In addition to age differences, other factors as gender and culture have been considered as factors that influence the ability to recognize and label emotions. Gender differences have been discovered by Philippot and Feldman (1990), whereby females of 3 to 4 years appear to develop this skill before males of 4 to 5 years of age. Children

were asked to discriminate among three facial expressions (e.g., happy, sad and scared) for a videotaped scenarios of an emotional experience. As an expressive component was not required for the children, this study appears to provide an early basis of gender difference for emotional perception and labeling. This gender gap, however, appears to dissipate by the time children reach eight years of age (Lenti, Lenti-Boero & Giacobbe, 1999). Early work in emotion perception has also involved the additional component of culture. Preliminary work by Izard (1971) suggested that the ability of emotion recognition and labeling across cultures were found in children as young as two years of age. These children were able to recognize and categorize faces as happy, sad, angry, scared and surprised. However, as this “cross-cultural” study involved two groups of American and French children and did not include stimuli of racially diverse children (Izard, 1971), this study cannot be considered a true cross-cultural comparison of children’s ability to recognize and label emotions. Therefore, additional research must explore the influence culture and ethnicity on emotional skills.

Although preschoolers prefer to rely upon facial cues to provide information regarding other’s feelings (Gnepp, 1983; Hoffner & Badzinski, 1989), children as young as three-years of age begin to develop an understanding that particular situations or contexts can arouse particular emotions (Borke, 1971; Fabes, Eisenberg, McCormick, & Wilson, 1988). In order to understand their own or others’ emotions, children become aware of common situations that elicit basic emotions (Denham, 1998). Parallel to children’s increased ability to recognize and label emotional expressions in the preschool years, children similarly have greater accuracy in interpreting happy and sad situations, rather than other negative emotion-eliciting scenarios (Fabes, Eisenberg, Nyman, & Michealieu, 1991). According to Brody and Harrison (1987), preschoolers had the most

difficulty with understanding common situations that would involve feelings of fear. Difficulties in understanding situations that elicit fear may be due to several reasons as lack of exposure to fear in the environment, difficulties in perceptual understanding of the expression of fear, and distinctive views preschoolers have of fear's causes (e.g., fear as not reality based) (Denham & Zoller, 1990; Lieberman, 1993; Strayer, 1986).

As the initial skill of identifying emotion-eliciting situations are established, a more complex skill of inferring the causes and consequences of such emotion-arousing situations is being developed. Children as young as 3 years of age have demonstrated that they understand simple situations that elicit happy responses, and an increasing ability to understand situations that elicit fear, sadness and anger (Dunn & Hughes, 1998; Michalson & Lewis, 1985). In understanding emotion-eliciting situations, some differences in understanding emotions may exist between the perspectives of experienced emotion (i.e., the child's own perspective versus another's) (Dunn & Hughes, 1998). Preschooler's causal understanding of their own emotions are generally more complete than those they subscribe to either their peers or parents (Dunn & Hughes, 1998). Dunn and Hughes (1998) discovered the thematic causes for preschoolers' understanding of particular feelings, with happiness being associated with nonsocial events (e.g., playing with toys), sadness and anger being related to social causes (e.g., separation from mom), and fear being related to fantasy (e.g., seeing a "monster"). During this stage of development, understanding of emotion-eliciting scenarios can be neatly summed as young children's understanding being related to some external phenomena and being triggered by a single event (Nannis, 1988).

This understanding of emotion-eliciting situations can also be translated to children's understanding of the causes for other's emotions, recognizing social and

nonsocial and internal causes for emotional displays (Dunn & Hughes, 1998; Fabes et al., 1988, 1991). In comparison to their own feeling states, preschoolers do appear to differ somewhat slightly in terms of what cues are utilized to determine other's emotion aroused from a particular situation. Preschoolers appear to rely more on the context when determining the causes of emotions for others, particularly for increased accuracy of anger and distress feelings (Fabes et al., 1988). Similar to their own experiences of subscribing negative emotions to social situations, preschoolers subscribe social reasons as the causes of others' negative feelings as anger, sadness, distress or pain (Denham & Zoller; Fabes et al., 1988). In contrast to the subscribing feelings of happiness to nonsocial events, preschoolers indicate that the happiness of others can also involve social physical events (e.g., being tickled), verbal experiences (e.g., getting a compliment), and nonverbal causes (e.g., making a funny face) (Strayer, 1986). Although children are able to more easily recognize situations that arouse feelings of happiness, children appear to have some difficulty in identifying and explaining its causes (Strayer, 1986). Instead, children are better able to recognize the causes for situations that arouse feelings of anger and pain in comparison to happiness and sadness (Strayer, 1986). As with the recognition and labeling of emotion, gender differences in the preschool years are also found when determining the causes of emotions. In comparison to boys, girls would generally refer to more interpersonal causes of emotions, and this may be due to their social experiences and their reasoning of their social world (Fabes et al 1988; Strayer 1986).

In order to comprehensively understand emotional situations, understanding does not only involve the elicitors of the situation, but the consequences as well. Preschooler can distinguish between the causes of emotions and its consequences

(Russell, 1990). Russell (1990) had preschoolers complete stories about why a protagonist felt an emotion and what the protagonist did as a result to demonstrate preschoolers' discrimination between causes and consequences. Furthermore, Denham (1996) found that this ability to distinguish between causes and consequences was also extended to the perspective of others, whereby preschoolers could tell the difference between causes of parental emotions and their subsequent actions due to emotional state (Denham, 1996). Therefore, preschoolers are able to make causal connections between causes and consequences of emotion-eliciting situations.

In addition to the abilities of labeling and identifying of emotional expressions and situations, children's understanding of emotions also involves the use of "emotion language to describe their emotional experiences and to clarify those of others" (Denham, 1998, p. 59). This is the most apparent aspect of emotional understanding as the use of emotional language is most easily observed in everyday situations. As previously noted, young children already begin to use emotion-descriptive adjectives from as early as 2 years of age (Bretherton et al., 1986; Ridgeway et al., 1985). By the 3 years of age, over 75% of children use terms for conveying feelings of happiness, sadness, fear, anger, loving, surprise and general states of being "good" and "mean" (Ridgeway et al., 1985). With the expansion of their emotional language, preschoolers are more able to communicate in order to influence others to meet their own needs (Dunn et al., 1991).

From early childhood, the children's understanding of emotional continues to adapt and mature with age. The understanding of simple emotions in early childhood lays the foundation for future competencies in understanding more complex emotions and situations which involves mixed emotions (Brown & Dunn, 1996; Dunn, 1995). In

addition, Dunn (1995) found that understanding of emotions in toddlerhood predicted perceived positive experiences with peers and moral sensibility in kindergarten.

Emotional understanding has been repeatedly been found to be related to children's social skills and sociometric status (Cassidy et al., 1992; Denham et al., 1990; Garner & Estep, 2001). Diamond (2001) even found that children's emotional understanding was related to greater acceptance and contact with peers who were physically different (i.e., other children with disabilities). Furthermore, the role of emotional understanding has been associated with higher academic achievement (Hughes et al., 1998; Izard et al., 2001) and preschooler's overall school adjustment (Shields et al., 2001).

*Factors That Impact Emotional Understanding: Emotional States and Intensity.* While emotional understanding involves knowledge of emotional concepts, this domain may be impacted by contextual factors. As emotional understanding includes the application of knowledge to emotional situations, feelings within that individual may be elicited to influence emotional processing. Transient emotional states of an individual have been found to impact emotional perception of others (Carlson, Felleman, & Masters, 1983; Niedenthal, Halberstadt, Margolin, & Innes-Ker, 2000). For young children, their emotional states have been found to decrease accuracy in the perception of sadness, as well as having implications for their motivation to affect change in their peers' emotional states (Carlson et al., 1983). Therefore, it would also be possible that transient emotional states may impact children's understanding of emotions.

As emotions may arise within the individual to impact emotional processing, the intensity of the emotional situation may also be considered as another factor that impacts the accuracy of emotional skills and the understanding emotions. With the perception of emotions, the intensity of emotions in the situation has been found to

affect decoding accuracy, with a linear relationship between the intensity of physically expressed emotions and decoding skills (Hess, Blairy, & Kleck, 1997). Therefore, parallel to emotion perception skills, the intensity of an emotional situation may affect accuracy in understanding emotions. Emotional understanding of given situations should include the intensity of feelings aroused. Previously mentioned theories of emotional understanding by Denham (1998) or Harris and Saarni (1991) do not account for the appropriate intensity of emotions for a given emotional situation. Although emotions can be organized in categories, as sad, happy, etc., these emotions also exist in a continuum that ranges in intensity. The intensity of emotional responses is important to consider in emotional functioning, as inappropriateness in emotional intensity may reflect emotional difficulties and even clinical psychopathology. Disorders, as depression and anxiety, involve inappropriate emotional symptoms that are excessive in its intensity. Therefore, it is important to consider children's perspective on the intensity of emotional situations.

*Issues Related to the Measurement of Emotional Understanding.* The study of emotions is complex, with research in this area utilizing multiple definitions of emotional concepts and a variety of methodologies. In terms of Denham's concept of emotional understanding, emotional labeling or the ability to identify emotional expressions has much overlap with that of concepts of emotion recognition or perception and its methodologies. Denham's second level of emotional understanding, which involves the identification of emotion-eliciting situations, has some overlap with terms as situation knowledge, which is the "understanding of context and events that are likely to provoke certain feeling states" (Garner et al., 1994) and affective perspective taking, which is the "ability to weight both expressive and contextual cues in

determining what another person might be feeling” (Denham, 1986). The use of these various terms gives rise to some confusion as they are similar yet somewhat different in its meanings.

In addition to some conceptual confusion in the literature, there is also a wide range of methodologies used in measuring the concept of preschoolers’ understanding of emotions in a given context or situation. Studies which claim to research emotion-eliciting situations have examined emotional understanding from the individual’s perspective (Casey, 1983) and the perspective of others, as peers (Michalson & Lewis, 1985) or adults (Denham et al. 1993; Stifter & Fox, 1986). The use of others also varied in the degree of familiarity of the adult to the child, since some adult perspectives involved parents (Denham et al. 1993), while others involve strangers or generic adult perspectives (Stifter & Fox, 1986). The perspective of others in understanding emotions most commonly uses emotional vignettes to capture children’s understand of emotions (Denham, 1986; Denham et al., 1994; Michalson & Lewis, 1985; Stifter & Fox, 1986). The presentation of the characters in the emotion-eliciting situations also varied, with the following methodologies: 1) using only orally read emotional vignettes (Schultz et al., 2001); 2) “live” presentations of the using puppets in conjunction with the orally read vignettes (Denham, 1986; Denham et al., 1994); or 3) the presentation of line drawings with story characters that had no facial features in conjunction with the vignettes (Camras & Allison, 1985; Diamond, 2001; Michalson & Lewis, 1985). The choice of the presentation format each has their own purpose of the degree to which additional cues are presented to the children. As the presentation of the emotion-eliciting situations can vary greatly, so can the format of the children’s responses. Children could be required to choose between presented emotions words (Stifter & Fox, 1986), facial line drawings

of emotional expressions without the use of affect vocabulary (Camras, 1980; Denham, 1986), or both (Smith & Walden, 1998). Each response methodology has its benefits and its limitations. Forced-choice responses tap children's recognition emotions and allow for greater control in the uniformity of responses that can be easily coded into specified groups. In contrast, open-ended responses allow children to freely express and recall emotional knowledge, with the limitation of having data that may not be easily sorted and coded into specified groups. Therefore, even the use of emotion-eliciting scenarios can vary greatly in presentation of stimuli and response options for preschooler's understanding of emotions.

Another format in eliciting preschoolers' understanding of emotions involved an emotional interview (Casey, 1983; Cassidy et al., 1992; Howe, Tepper, & Parke, 1998; Seja & Russ, 1999; Southam-Gerow & Kendall, 2000). The common themes among these interviews were the open-ended questions that elicited understanding of emotions through personal experiences and their own perspective (Casey, 1983; Cassidy et al., 1992; Howe et al., 1998; Seja & Russ, 1999; Southam-Gerow & Kendall, 2000). However, some interviews of emotional understanding involved the understanding of others' (i.e., parents) emotions and were also interactive, allowing children express themselves through the manipulation of dolls (Denham et al., 1993). In general though, most of the emotional understanding interviews involve verbal responses to open-ended questions, which are then coded for their level of sophistication in the verbalization of understanding emotions (Casey, 1983; Cassidy et al., 1992; Howe et al., 1998; Seja & Russ, 1999; Southam-Gerow & Kendall, 2000). Coding schemes for these responses varied by the study (Casey, 1983; Cassidy et al., 1992; Howe et al., 1998), while others utilized the standard format and coding scheme of the Kusche Affective Interview-

Revised (KAI-R) (Seja & Russ, 1999; Southam-Gerow & Kendall, 2000). Therefore, even within this methodology of emotional interviews, there is much variation in observing children's understanding of emotions. When considering emotional understanding as a potential research topic, it is important to have a clear conceptual understanding of this concept and the specific research questions that dictate a specific course of methodology.

### *Importance of Context to Emotional Development*

As children do not develop in isolation, context plays an important role in emotional development. Individuals are intertwined with context, in which there are a variety of structures that influence the developing individual (Eamon, 2001). Context as conceived by Bronfenbrenner (as cited in Eamon, 2001) includes various types of environments, such as microsystems, mesosystems, exosystems, macrosystems, and chronosystems. Microsystems, as contexts of the immediate environment, are often considered key influences in emotional development, since they encompass situations of the home, peer group or school (Eamon, 2001). Through interactions with socializing agents of the immediate environment as family members and peers, children learn and practice appropriate behaviors and emotions that contribute to their emotional development and functioning. The influence of the microsystem context on emotional development has been firmly established, illuminating the considerable role of families and peers.

Context significantly influences children's social and emotional skills, whereby the presentation of these skills may be altered by the specific contexts. Families, as one contextual microsystem, contribute to emotional development through factors as family expressiveness and have been linked to increased social skills and likability (Cassidy et

al., 1992). The context of the family and peers appear to be differentiated in terms of children's emotional regulation, whereby children regulate emotions significantly more in the presence of their peers in comparison to their parents and teachers (Underwood, Cole, & Herbsman, 1992; Zeman & Garber, 1996). In addition, Garner (1996) suggests that negative peer interactions, related with negative attributions of aggression and denial, in fact detract from the development of normal social and emotional processing. Differences in emotional competence and behavior is also found for preschoolers in situations that involve the home (i.e., mother) versus the school (Denham & Grout, 1993). Furthermore, the regulation of emotions may dependent on the gender of the individual. Preschool boys regulate affect more with their mothers when compared to girls (Zeman, Penza, Shipman, & Young, 1997). Emotion regulation and expression can also depend upon the presence of strangers, with children being more inhibited with their sibling in the presence of a stranger (Garner, 1995). Therefore, contextual factors in given emotional situations contribute to children's competency with emotional and social skills.

As part of children's contextual environment, disruptions in normal social and emotional development can be directly linked factors, such as abuse. Abuse has been found to be detrimental to children's emotional and social development, diminishing their proficiency with emotion perception (Pollak et al., 2000), emotional understanding (Howe et al., 1998; Shipman & Zeman, 1999), and social skills (Camras, Grow, & Ribordy, 1981; Howe et al., 1998). This type of contextual factor limits children's ability to develop appropriate emotional skills. Therefore, microsystems as a context play a crucial role in children's emotional development, allowing a child to acquire and expand their emotional skills. It is important to attend to the various influences that context

may play on emotional and social development. In addition to the microsystem, the context of a child's macrosystem, which includes influences of the broader culture and socioeconomic environment, can also be another factor in their emotional and social development.

### *Culture and Its Relevance to Emotional Development*

A child's macrosystem context can contribute to their emotional and social development. Described by Bronfenbrenner as "a cultural 'blueprint' that partially determines the social structures and activities that occur in more immediate system levels" (as cited in Eamon, 2001), the macrosystem includes elements as shared knowledge and cultural values, lifestyles and customs. Although difficult to encapsulate, culture can be conceived of as a "set of traditional, explicit and implicit beliefs, values, actions and material environments that are transmitted by language, symbol and behavior within an enduring and interacting group of people" (Saarni, Mumme, & Campos, 1998). These cultural factors of the macrosystem permeate the immediate contexts of the microsystem, broadly impacting emotional development. Cultural differences in parental interactions and rearing strategies have had differential effects on children's expressivity, emotional regulation and behavioral inhibition (Chen et al., 1998; Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996). This is not surprising considering that parents as key socializing agents are also models of particular cultural and ethnic values. Parental influences on emotional development due to cultural differences are reflected qualitatively in emotional talk between mothers and their children (Eisenberg, 1999). Although Mexican American dyads of mothers and their 4-year old children did not quantitatively talk more about positive emotions in

comparison to Anglo American dyads, Mexican American dyads did focus more on the emotions of the parents and others than on the child's emotions (Eisenberg, 1999). In addition, the content of emotional talk also differed in that Mexican Americans focused less on the causal nature of emotions when compared to Anglo Americans (Eisenberg, 1999). Differences in parental values related to emotions are also found between parents and children in the U.S. and Japan (Zahn-Waxler et al., 1996). In contrast to U.S. mothers, Japanese mothers emphasized "psychological discipline" over open expression of emotions (Zahn-Waxler et al., 1996). In emotional discussions between Japanese mothers and their 5-year old children, reasoning and guilt-induction strategies were utilized more often by Japanese mothers to focus children's attention on others and the consequences of hurting them (Zahn-Waxler et al., 1996). The parental focus on others is also illustrated by Conroy et al.'s example of a Japanese mother's response: "It is not Mommy alone who is shopping. Other people are also here to shop, and the storeowners have neatly lined things up so that the customers will buy them. Therefore, it will be annoying to them if you behave this way" (as cited in Saarni, 2000). When parental standards and expectations are not met, Japanese mothers have reported strong negative feelings, as disappointment, toward their children (Zahn-Waxler et al., 1996). These contextual factors of parental disapproval, values and emotional discussions that are particular to a certain culture act as socializing agents and models for learning about emotions that are appropriate to that cultural context.

Another contextual factor related to culture that influences emotional development is parental values related to emotional expressivity (Zahn-Waxler et al., 1996). As previously mentioned, parental expressivity already has implications for children's own emotional expressivity (Garner et al., 1994). As parental expressions of

emotions are related to their specific cultural values, these values will be transmitted to their children and in turn influence their emotional expressivity. Cultural differences in the value of emotional expressivity have been found between U.S. and Japanese mothers (Zahn-Waxler et al., 1996). Although emotional expressivity was valued by Japanese mothers, these mothers did not emphasize it as much when compared to U.S. mothers (Zahn-Waxler et al., 1996). These cultural differences in expressivity may also be related to cultural differences in emotional experiences, whereas U.S. children displayed more anger, aggressive behavior and language, and underregulation of emotion (Zahn-Waxler et al., 1996). Although facial expressions of emotions are believed to be universal to all cultures (Hejmadi, Davidson, & Rozin, 2000; Saarni, Mumme, & Campos, 1998), cultural differences in emotional expressivity through quantity and intensity will vary (Camras et al., 1998). For instance, Camras et al. (1998) found that even from infancy, children already display cultural differences in the expression of emotions through smiling and crying. In a continuum of less to more expressive, Japanese infants fall in between the least expressive group of Chinese infants and most expressive group of European American infants, with differences in expression related to specific brow, cheek and mid-facial actions (Camras et al., 1998). Similar results were found for adults, whereby Asian Americans were found to be less expressive than Caucasians, African-Americans, and Hispanics (Gross & John, 1995). Related to emotional expressivity is the ability to regulate emotions. Research in cultural differences related to emotion regulation has been variable, as this concept has been observed with and without the presence of others (who also varied in their social status) and varied in the ethnicity of the main character (Ekman 1972 and Friesen 1972 as cited by Matsumoto, 1993; Tsai, Levenson, & Carstensen, 2000). Despite differing results, culture appears to have an overriding effect

on emotion regulation and acceptability in relation to social status (Ekman 1972 and Friesen 1972 as cited by Matsumoto, 1993; Matsumoto, 1990).

Another emotional attribute that is influenced by cultural factors is emotion perception. Judgments about other's expressions of emotions were varied by cultural groups (Gosselin & Larocque, 2000; Matsumoto, 1993). Research in emotion perception, as it relates to culture and ethnicity, can vary since the perceiver and target of the emotions can vary in their cultural/ethnic background. Children, ranging in age from 5 to 10 years and who belonged to the majority group of Caucasian Canadian, indicated differential perceptions of emotion for Asian and Caucasian facial expressions (Gosselin & Larocque, 2000). These children were more efficiently able to categorize expressions of disgust for adult Caucasian faces and expressions of fear and surprise for adult Asian faces rather than Caucasian faces (Gosselin & Larocque, 2000). In addition, Matsumoto and Kishimoto (1983) found additional cross-cultural differences in which the development of children's ability to perceive emotion varied for Japanese and American children. At 4 to 5 years of age, American children were able to identify the emotion surprise, while Japanese children could identify both surprise and sad emotions (Matsumoto & Kishimoto, 1983). At age 6 to 9 years of age, American children were able to correctly identify four main emotions of surprise, sadness, anger and happiness. In contrast, Japanese children were able to correctly identify at age 6 three emotions of happiness, surprise and sadness, and at age 7-9 years all three emotions (Matsumoto & Kishimoto, 1983). Matsumoto and Kishimoto's (1983) study indicates that while children in various cultures increase their ability to perceive emotions with age, culture is important in influencing the differential rate of development for emotion perception. When also considering the ability to perceive mixed emotions, cultural differences have

again been found between Japanese and American samples (Yrizarry, Matsumoto, & Wilson-Cohn, 1998). Yrizarry et al. (1998) found that when perceiving mixed emotions, Japanese and American samples varied greatly in terms of the additional emotions ascribed. For example, when viewing angry expression, Americans perceived more contempt and disgust, while Japanese perceived more sadness in addition to anger (Yrizarry et al., 1998).

Cultural factors as language have also been known to affect the perception and labeling of emotions (Matsumoto & Assar, 1992). Matsumoto and Assar (1992) found that accuracy of emotion perception was higher for bilingual students when responding in English rather than in Hindi. Perception of emotional intensity also varied based on language, whereby greater intensities of anger were attributed to female photos when rated in Hindi and greater intensities of sadness when rated in English (Matsumoto & Assar, 1992). Emotion perception differences attributed to culture may also arise in judgments of emotional intensity (Matsumoto, 1993). Matsumoto (1993) found that African Americans attributed greater levels of intensity when perceiving emotions, and also reported a greater frequency of angry expressions when compared to other ethnic groups of Caucasian American, Asian Americans and Hispanic Americans. Asian Americans were also found to have reported consistently lower judgments on the intensity of emotions (Matsumoto, 1993). Furthermore, regardless of the target's culture and gender, Caucasian Americans had greater attributions of emotional intensity for all emotions (except for disgust) when compared to Japanese participants (Matsumoto & Ekman, 1989; Matsumoto, Kasri & Kookan, 1999; Yrizarry et al., 1998). When considering the perceived emotions that evoked the highest rating for intensity, Americans rated facial expressions of happiness and anger with the highest emotional

intensity, while Japanese gave facial expressions of disgust the highest emotional intensity (Matsumoto & Ekman, 1989). Therefore, cultural factors that influence a range in abilities for emotion perception and its intensity can involve any combination of factors that include the ethnic background of the target and perceiver of emotion and their language abilities.

As previously mentioned, fundamental cultural differences in the emotional experiences and behaviors exist from early on. Although emotions and their behavioral manifestations can be considered universal (Hejmadi et al., 2000; Rubin, 1998; Saarni et al., 1998), culture adds diversity to the range of emotions through factors as intensity and frequency, allowing for different interpretations of emotions and behaviors. Therefore, it is through this range of emotional experiences that stereotypes or “emotional profiles” have been found for particular cultures (e.g., Japanese as “shameful”, Dobuans as “paranoid” and Sebei as “emotionally flat”) (Lutz, 1985). Emotional characterizations have also been made for general categories of society, as emotions in collectivist cultures being more grounded in relationships with others and social worth, rather than with the self, as compared with individualistic societies (Mesquita, 2001). Cultural differences in emotional experiences can also be further understood with the nuances conveyed through emotional language or cross-cultural linguistic differences. Words particularly those related to emotion in other languages may often be difficult to capture during translation. Lutz (1985) reports that there are particular words in the language of the Micronesian Ifaluk that has cultural nuances, such as the word “song” meaning “justifiable anger”. With nuances specific to a particular culture embedded in a child’s context, the influence of culture and ethnicity is an inescapable factor in children’s emotional development.

Research related to cultural differences of emotional attributes has important implications for children's socioemotional development. Particularly in the area of social relationships, cultural differences may have implications for racial preference and thus racial biases. By age 3 and throughout early childhood, Caucasian children already show some bias for White humans (Duckitt, Wall, & Pokroy, 1993; Levy, 2000). Similarly, Jewish-Israeli preschoolers expressed preferences toward their in-group and negative biases towards others of another ethnicity (i.e., Arabs) (Teichman, 2001). As children already have already established an awareness of race and ethnicity (Van Ausdale & Feagin, 1996), children already begin to exhibit same-group preferences for playmates at around 30 months of age (Katz & Kofkin, 1997). At around 36 months of age, ethnic/cultural differences emerge, whereby Caucasian children increased their preference for same-race playmates in contrast to African American children whose same-race preference decreased sharply (Katz & Kofkin, 1997). This preference by Caucasian children to prefer the same ethnic group is still evident at and beyond 60 months of age (Glover & Smith, 1997; Katz & Kofkin, 1997). Therefore, children's cultural background and preference for the same background will impact children's opportunity to practice social skills with peers. These cultural differences in socializing agents and practices can impact children's emotional understanding and development. Presently, there is a dearth of research in the area of cultural differences and emotional development. Much of the research that involves emotions and culture are primarily focused on adults and also involve cultural studies across countries, rather than on children's emotional development. With a country as diverse as the United States, it is critical that research explore the influences of cultural/ethnic differences on emotional development for all populations within this country. Matsumoto (1993) raises the

question about the adequacy of the typical research operationalization of American culture being a Caucasian sample. Matsumoto (1993) points out that as the heterogeneity of American society rises, researchers and society must question and reconsider what is representative of the “American” culture. Considering that minorities are a rapidly growing segment of society, ethnic and cultural groups currently constitute about 35% of the public school population and 50% of the student population in many large urban school districts of various states, forcing some change to previous conceptions of American society (Quintana, Castillo, Elisa, & Zamarripa, 2000). Therefore, research is much needed to clearly understand the role of culture and ethnicity in order to facilitate healthy emotional development.

#### *Ethnicity and Its Relevance to Emotional Understanding*

Considering that culture “determines the types of events to which the child is exposed” (Saarni et al., 1998), culture would also have a large impact on children’s understanding of emotions. As emotional experiences are dependent on socially determined meanings, children’s competence and understanding of emotions must also include an understanding of one’s “emotional culture” or how individuals within a particular culture interpret and express culture (Gordon, 1989). Considering that contextual perspectives of the self, friend or mother influenced children’s understanding of emotions (Dunn & Hughes, 1998), it would be natural to correspond differences in emotional understanding to the contextual factor of culture and ethnicity. Cultural differences have shown that emotional words may be defined primarily by the situation in which they occur (e.g., emotion words of the Micronesian Ifaluk or Japanese), or may have some broader internal feeling state (e.g., English emotion words) (Lutz, 1985).

Therefore, such linguistic differences in emotion words could naturally correspond to cultural differences in the understanding of emotions. In addition, preliminary work also suggests cultural differences for the organization of emotions, whereby certain cultures place a greater emphasis on a particular hierarchy of emotions (e.g., Chinese emphasis on shame) (Shaver, Wu and Schwartz 1992 as cited in Fischer, Wang, Kennedy, & Cheng, 1998). As emotional understanding also involves key foundational skills of emotion labeling and perception, cultural influences on these factors will also have a moderating effect on the understanding of emotions.

Research on emotional understanding of diverse populations typically involved research on a specific population rather than a comparison of abilities across cultural or ethnic groups (Smith, 2001; Smith & Walden, 1998). Without comparison to a major cultural or ethnic group, preliminary work in this area indicates that minority (i.e., African American) children are similar to majority group (i.e., Caucasian) children, in that competency with emotional understanding is related to age, cognitive language skills and greater peer acceptance (Smith, 2001; Smith & Walden, 1998). While it is assumed that emotions are universal to all cultural groups, variations due to culture may need to focus on emotional content, intensity or contexts as dimensions of emotional understanding. Cultural differences have been associated with the dimension of emotional understanding that involves the ability to recognize emotion-eliciting situations (Harris et al. 1987). While Dutch, British and Nepalese children could recognize emotional situations, thematic differences in reported emotional situations varied based upon culture (Harris et al. 1987). Harris et al. (1987) summarized emotion content for Western peers as involving more child-like themes of school, pets and protecting toys, while Nepalese children raised emotions related to adult-like concerns

as illness, poverty and death. In addition to knowledge of emotional situations, ethnic children may also vary in their understanding of appropriate responses in a given emotional situation (i.e., emotional display rules) (Cole & Tamang, 1998; Matsumoto, 1990). Matsumoto (1990) found that cultural differences in assigning how appropriate or inappropriate particular emotions were for a particular social context (e.g., alone, with ingroups, outgroups, high-status group, or low-status group). While Americans rated disgust and sadness as more appropriate to ingroup members, the Japanese considered that anger and fear was more appropriate for others, particularly those who they considered of lower status (Matsumoto, 1990). Cultural differences in the understanding of emotions appropriate to particular contexts have also been found with children (Cole & Tamang, 1998). For distinct cultural groups within Nepal, Cole and Tamang (1998) found that the Chhetri-Brahmin children were more likely to mask negative emotions when compared to Tamang children. Similar results were also found for cross-cultural comparisons between Indian and British children (Joshi & MacLean, 1994). While there were no differences between Indian and British boys, there were three times more Indian girls in comparison to British girls who endorsed the belief that the children should attempt to hide negative feelings from adults (Joshi & MacLean, 1994). Therefore, as different cultures emphasize particular emotional responses, social rules and behaviors that make up emotional experiences, children's overall understanding of emotion will adapt accordingly. Children's emotional understanding can be defined as a function of the situation, context and social relationships. It is easy to imagine that what one culture may find funny or silly could be interpreted differently by another cultural group.

## Chapter III – Methods

### *Participants*

Twenty-eight participants of 4 to 5-years of age participated in the study from the pre-kindergarten and kindergarten classes at the Center for Young Children (CYC) at the University of Maryland. The Center for Young Children provided a diverse source of students, as its students are primarily children of the University faculty and staff. As university-affiliated, the CYC is a notable early childhood program, which is guided by the philosophy that children are allowed to learn and express themselves creatively and freely. The CYC has also an exceptionally diverse student population, with peer exposure to a range of ethnicities and cultures. The makeup of the CYC during data collection was as follows: African American: 13%; Asian American: 21%; Caucasian: 42%; Hispanic: 3%; Multiethnic: 15%; Other Ethnicities:

The sample population primarily included females, being 71.4% of the sample (8 males and 20 females). Of the 28 participants, the mean age was 4.56 years (standard deviation of 0.51). The majority of participants were of Caucasian background (64.3% of the total sample). Asian American participants made up a quarter of the sample (25.0%), and African American participants were the smallest minority group tapped (10.7%). Additional demographic information regarding age and ethnic background is included in the table below.

Table 1.

Demographic Information of Participants

	<u>4 Year-Old</u>		<u>5 Year-Old</u>	
	<u>Pre-Kindergarten Class (N=13)</u> Females (n=10)	<u>Males (n=3)</u>	<u>Kindergarten Class (N=15)</u> Females (n=10)	<u>Males (n=5)</u>
African American	2	0	1	0
Asian American	2	0	3	2
Caucasian	6	3	6	3

*Design*

In order to explore preschoolers' understanding of emotions in relation to ethnic groups, the study examined preschoolers' responses to emotional vignettes that involve story characters of a variety of majority and minority ethnic groups (i.e., African American, Asian, and Caucasian). Possible respondent differences to the ethnicity of story characters were also examined through the emotional intensity ascribed to the story character. The experimental design of this study was a 4 x 2 within-subjects mixed factorial design with emotion-eliciting scenario (happy, sad, scared, and angry), and same vs. different ethnic match condition as the two within-subjects factors.

*Procedures*

Letters requesting participation in the study were sent to the parents of all children attending the CYC who were in the pre-kindergarten and kindergarten classes. In addition to requesting consent, parents were asked to indicate the ethnic/racial background of their child. Prior to testing, the examiner spent time in each of the pre-kindergarten and kindergarten classes, in order for the children to become familiar with

the examiner. After being introduced to the entire class, time spent in the classroom involved the examiner playing with the children during their play periods. The examiner made sure to spend time with each child that would be potentially participating in the study. Per the request of the teachers, participation in the study occurred during the children's play time. All participants who returned the signed consent forms were considered for inclusion in the study. However, children who did not fit the three racial categories were excluded from the study. Four children refused to give their assent for participation.

To initially introduce the study and gain assent, the children were individually approached during play time. At that time, the child was asked if they would like to do some stories with the examiner. They were told that they would be shown pictures and told stories about children their age, and that the examiner wanted to know what they thought about those stories. After this quick description, the examiner then asked the child if that was something that they would like to do. If the child gave his or her assent, the child was then individually tested in one 10-minute session at the CYC in a quiet office or classroom. Most of the children gave their assent at the first request for participation. None of the children immediately refused to participate. However, several children did request that the examiner come back at another time, as they were in the middle of playing. During this session, the participants received the emotional understanding and emotional intensity tasks. Prior to the testing of participants, one trial run was completed in order to ensure the integrity of the testing procedure. As there did not appear to be any oversights or problems with the testing materials or process during the piloting, the same testing procedure was conducted as described below.

Sitting next to the experimenter, the participant viewed a set of three photographs of stimulus children that were of the same gender and approximate preschool age as the participant. Pictures of the stimulus children included a fictitious name and only a frontal view of the child's face and shoulder area, in order to eliminate any bias based on appearance or clothing. After examining several different children's magazines, these pictures were selected based on the criteria of demonstrating no explicit emotion. The facial expression of the stimulus children were generally neutral, with no overt indications of happiness (e.g., smiling), sadness (e.g., frowning), fear (e.g., widened eyes and gaping mouth), or anger (e.g., furrowed eyebrows or grimace). The set of photographs included a child of the same ethnicity (same ethnic match) and two other ethnic groups (different ethnic match). Therefore, all of the students received all three ethnic background conditions (African, Asian, and Caucasian). This procedure of including two different ethnic-match stimuli was utilized to reduce any effects of an out-group bias based upon the participant's membership to a majority or minority group. The designation of the different-match ethnic photos was counterbalanced across participants, to ensure that all minority groups were equally utilized.

The experimenter introduced the task to each participant by first presenting the photographs and the featured stimulus children. The introduction of the set of photographs was also counterbalanced across participants. Children's names were selected to make salient the ethnic differences among the featured stimulus children (see Appendix A). The experimenter then explained that she would present the participant with stories about girls or boys (of the same gender of the participant), which would include the following introduction:

“Here are some pictures of kids that I am going to tell you some stories about. This is ‘Child X’. This is ‘Child Y’, and this is ‘Child Z’. Children can feel differently. Sometimes they feel happy, sometimes they feel sad, or they can feel scared or mad. So I’d like to tell you some stories about these boys/girls that I had just shown you. After each story, I will then ask you about how that child in the story was feeling. Were they feeling happy, sad, scared or mad? I’m just interested and what you think that child feels, so there are no right or wrong answers.”

During the introduction, all of the stimulus photographs were presented to the child, with the experimenter pointing out each stimulus child and his/her name. After the introduction, all of the photo stimuli were removed. Presentation of the subsequent stories was grouped together by the actor’s ethnicity and in a set of the four emotion vignettes. As a prompt, the participant was then presented with the photo of the stimulus child again and told that they would be told several stories about him/her. The photo was then removed prior to being told the four emotion-eliciting vignettes that involved that particular stimulus child. This was done in order to prevent the child from choosing an emotion based upon any interpretation of the stimulus photo. This procedure was repeated for each set of emotion-eliciting scenarios.

Presentation of the 24 emotion vignettes was counterbalanced across participants for all possible orders of emotion vignettes. After the child was presented with the story, four line drawings of faces that represented faces of happiness, fear, sadness or anger, were presented to prompt the child to choose an emotion for the story character. The child was then asked about the emotional intensity of the story character:

“Now, I would like to know how much did ‘Child X’ feel [chosen emotion]. Did he/she feel ‘a little [chosen emotion]’, ‘pretty [chosen emotion]’, or ‘very [chosen emotion]’?”

After the child responded to the vignettes, the experimenter then concluded the session by asking the child if he or she felt if any of the stories had bothered them. This

was done in order to assess and resolve any potential feelings that may have been evoked by the stories. Typically, any feelings that are evoked with these stories would be brief, with no long-term effects. If the child had indicated that a particular story did leave them with any residual feelings of sadness, fear or anger, the experimenter would have addressed them by having the child conclude the story on a positive note. For example, if the child felt bothered by “Mary had a pet bird. This morning, the door to the bird cage was broken, and her bird flew away,” then the experimenter would help the child to conclude the story positively as having the bird being found by Mary. However, with the present study, none of the participants had indicated that any of the featured stories had bothered them. Furthermore, reports from the preschool teachers indicated that none of the children had reported any feelings of discomfort regarding the stories, and that some had in fact enjoyed participating in the study and had fun with the stories.

### *Measures*

*Emotional Understanding Measure.* Children were read 24 brief vignettes describing events likely to elicit feelings of happiness, sadness, anger and fear. Being composed of 1-2 sentences, these vignettes were short and involved simple and familiar experiences to preschool children. The vignettes did not involve situations in which children are expected to understand mixed emotions or to also disguise or conceal emotions. The emotion-eliciting stories were selected from previous studies on emotional understanding that also utilized emotion vignettes (see Appendix B for vignettes and their original source), and many were piloted with adults for consensus on the emotional content of the vignette. The majority of the vignettes were used verbatim

as in previous studies. Some were adapted slightly to be appropriate for the preschool age. However, the theme and content of the emotion vignette remained consistent, so as not to alter the emotion that was being elicited. Story characters were of the same gender as the participant.

As the goal of this study was to examine the effects of the story character's ethnicity on emotional understanding, vignettes were from another individual's perspective. This raised the question regarding differential understanding between vignettes that involve another story character versus a vignette from the participant's point of view. However, Barden, Zelko, Duncan and Masters (1980) indicated that no major differences exist for even young children when ascribing emotions to stories that involve a personal perspective versus another perspective. The twenty-four vignettes featured main story characters of the same ethnic membership and two different ethnic groups. Emotion vignettes also featured each emotion twice for each same ethnic match group and the different ethnic match groups. The presentation of the emotion vignettes were grouped together by the story character, with each character having a corresponding set of four emotions. Therefore, the presentation of emotions and the order of same or different-ethnic story character were counterbalanced across all participants (See Appendix C for all possible orders of emotions and corresponding ethnicities of story characters).

To analyze children's responses to the emotional understanding task, accuracy was determined by coding responses with either 1 point for correctly identifying the emotion or 0 point for incorrect identification, regardless of the valence of the response.

*Emotional Intensity Measure.* Judgments of emotional intensity were made after participants chose an emotion for the vignette. The examiner asked the participant

“How much did [story character’s name] feel [chosen emotion]?” Participants were presented with a 3-point scale that varied the intensity of the four line drawings of faces that represented faces of happiness, fear, sadness or anger. Using this 3-point scale, participants chose whether the character in the story felt the emotion “a little [chosen emotion]” (1), “pretty [chosen emotion]” (2), or “very [chosen emotion]” (3). For the example of the happy line drawing, “a little happy” was portrayed with a slight smile, “pretty happy” was portrayed with a medium-size smile, and “very happy” was portrayed with a wide and large smile. This type of three-point scale was utilized by Diamond (2001) for participants between the ages 4 and 6, and scoring of vignettes ranged from 1 to 3 points. The lowest score possible was assigned when a child chose the mild emotional intensity of “a little”. Scores of 2 and 3 corresponded to “pretty” and “very” categories of emotional intensity.

#### *Data Analysis*

Analyses were conducted based upon the differences between the emotional understanding ratings assigned to story characters of the same ethnic group and different ethnic groups. ANOVAs were utilized to analyze the factors of these discrepancies. When considering Research Question 1, a general ANOVA ( $F_{\text{same/different match for emotional understanding (eu)}}$ ) examined the accuracy of emotional understanding ratings for various same ethnic match group and different ethnic match groups, in order to determine if the similarity or difference to the ethnicity of the story characters impacted the participant’s understanding of others’ emotions. General descriptive statistics also indicated the overall the degree to which participants was accurate in their assessment of the emotions in a given situation.

Analyses also determined the accuracy of emotional understanding for each particular emotion ( $F_{\text{emotion}}$ ). An additional F-test ( $F_{\text{emotion} \times \text{match(eu)}}$ ) also examined whether or not significant differences exist among the various emotions, due to ascribed same-group and different-group understanding of emotions. This analysis corresponded to Research Question 2, which examines whether understanding of specific emotions may differ based upon ethnic background of the story character.

Analyses were conducted based upon the differences between the emotional intensity ratings ascribed to story characters of the same ethnicity and different ethnicity match to the participant. ANOVAs were utilized to analyze the factors of these discrepancies. General analyses of an F-test ( $F_{\text{same/different match for emotional intensity (ei)}}$ ) first viewed general emotional intensity ratings in terms of differences between ratings for the same and different ethnic matches, regardless of the specific emotion. This examination for ethnic match differences corresponds to Research Question 3. Additional analyses determined whether particular emotions, regardless of the ethnicity of the story character, were known to have greater emotional intensity ( $F_{\text{emotion}}$ ). Subsequent analyses also examined whether emotional intensity differences between same and different ethnic groups depend upon particular emotions ( $F_{\text{match(ei) \times emotion}}$ ). The possible interaction between the ascribed emotional intensity and the ethnic match of the story character to the participant (i.e., same versus different ethnic group) relates to Research Question 4.

## Chapter 4 - Results

The results are presented in two parts, focusing on the accuracy of emotional understanding and the emotional intensity ratings. The first set of analyses examined children's accuracy in understanding emotions for story characters of the same ethnic group and different ethnic groups. This set of analyses also examines accuracy in understanding others' emotions by each specific emotion (happy, sadness, fear and anger). The second set of analyses examined children's ascription of the emotional intensity for story characters of the same ethnic group and different ethnic groups. This set of analyses also examines the intensity of emotional ratings by each of the four emotions.

### *Emotional Understanding*

In order to analyze the accuracy of emotions, an accuracy proportion was calculated for each participant by each of the four emotions and the ethnic match of the story character. This proportion involved a simple ratio of the number of accurate emotion perceptions divided by the number of opportunities available for a designated emotion. An accuracy proportion of 1 signifies 100% accuracy of a designated emotion within either the same or different ethnicity condition. The descriptive statistics for accuracy proportions, including mean scores, standard deviations, and ranges are listed in Table 2. These general descriptive statistics indicate the degree to which participants are accurate in their assessment of the emotions by type of emotional scenario and by the match between the story character and the participant.

Table 2.

Mean Accuracy Proportions of Understanding Emotions for Same-Ethnicity or Other-Ethnicity Match of Story Characters

Emotion	Same Match			Other Match			Overall		
	Accuracy	Standard		Accuracy	Standard		Accuracy	Standard	
	Proportion	Deviation	Range	Proportion	Deviation	Range	Proportion	Deviation	Range
Happy	1.000	.000	1.00	1.000	.000	1.00	1.000	.000	1.00
Sad	.893	.209	0.50-1.00	.892	.198	0.25-1.00	.893	.028	0.25-1.00
Fear	.875	.259	0-1.00	.866	.144	0.50-1.00	.871	.025	0-1.00
Anger	.571	.402	0-1.00	.446	.336	0-1.00	.509	.054	0-1.00

N=28

Addressing Research Question 1, a repeated-measures ANOVA reveals no significant overall within-subjects effect for the ethnicity match on children's accuracy judgments of perceiving the emotions of story characters that were the same or of different ethnicity [ $F(1, 27) = 2.149, p = 0.154$ ]. A repeated-measures ANOVA analyses did reveal an overall effect of type of emotion on participants' understanding of emotions [ $F(3, 25) = 28.628, p < .001$ ]. According to descriptive statistics, happy scenarios were the most easily identified by participants, and angry scenarios were the most difficult to identify by participants. With negative emotions of sadness, fear or anger, participants generally would respond with another negative emotion as the incorrect response rather than choosing a positive emotion of happiness.

Additional error analyses were examined to consider what types of errors participants were making for a given emotional scenario. For designated sad vignettes, participants significantly chose an angry response over other incorrect responses of happiness or fear [ $F(2,26) = 10.515, p < .001$ ]. For designated anger vignettes, participants significantly chose a sad response over other incorrect responses of happy or scared [ $F(2,26) = 68.740, p < .001$ ]. For designated fear vignettes, participants significantly chose a sad response over other incorrect responses of happiness or anger [ $F(2,26) = 10.605, p < .001$ ].

Table 3.

Error Frequencies for Identifying Emotion Vignettes

Emotion of Vignette	Emotion Errors				Total
	Happy	Sad	Fear	Anger	
Happy	---	0	0	0	0
Sad	1	---	1	20	22
Fear	0	18	---	5	23
Anger	0	87	6	---	93
Total	1	105	7	25	

With a 2 (ethnicity match) x 4 (emotion) repeated-measures ANOVA, no significant interaction effects were also found for the accuracy of emotion perception. This analysis corresponds to Research Question 2, which examines whether understanding of particular emotions may differ based upon ethnic background of the story character.

#### *Emotional Intensity*

In order to analyze the intensity of emotions, an average of designated ratings was calculated for each participant by each of the four emotions and the ethnic match of the story character. On a 3-point scale, the highest number of 3 signifies the highest intensity rating (“very”), 2 signifies a intermediate rating of emotional intensity (“pretty”), and 1 signifies little emotional intensity (“a little”). The descriptive statistics for intensity ratings, including mean scores, standard deviations, and ranges are listed in Table 4. The general descriptive statistics indicate the degree of emotional intensity for

each of the four emotions ascribed by participants to story characters that are the same or different ethnic background.

Table 4.

Mean Intensity Ratings of Emotions for Same-Ethnicity or Other-Ethnicity Match of Story Characters

Emotion	Same Match			Other Match			Overall		
	Intensity	Standard	Range	Intensity	Standard	Range	Intensity	Standard	Range
	Rating	Deviation		Rating	Deviation		Rating	Deviation	
Happy	2.768	0.518	1.00-3.00	2.980	0.306	1.75-3.00	2.838	0.66	1.00-3.00
Sad	2.696	0.645	0-3.00	2.714	0.496	1.33-3.00	2.705	.082	0-3.00
Fear	2.668	0.429	1.50-3.00	2.776	0.336	2.13-3.00	2.728	.093	1.50-3.00
Anger	2.089	1.225	0-3.00	2.223	1.154	0-3.00	2.156	.170	0-3.00

N=28

Addressing Research Question 3, a repeated-measures ANOVA reveals no significant overall within-subjects effect for the match of same or different ethnic background on children's perception of emotional intensity [ $F(1, 27) = 1.472, p = .236$ ]. A repeated measure ANOVA analyses did reveal an overall effect of type of emotion on participants' ascription of intensity ratings [ $F(3,25) = 9.176, p < .001$ ]. According to descriptive statistics, the most emotionally intense scenarios were typically happy, and scenarios that raised the least amount of emotional intensity were angry situations.

With a 2 (ethnicity match)  $\times$  4 (emotion) repeated-measures ANOVA, no significant interaction effects of were found for emotional intensity ratings. This analysis corresponds to Research Question 4, which examines whether participants perceived the intensity of particular emotions to differ based upon ethnic background of the story character.

## Chapter 5 - Discussion

The understanding of others' emotions is a key skill in developing empathy and social skills, and in the preschool years is highly associated with later social competence (Denham, et al., 2002). Others who are different from one's self may impact that understanding of others and their emotions. Race and ethnicity is one salient factor that must be considered when discussing the necessary emotional and social skills needed in social interactions. This raises the question as to whether understanding others' emotions is affected by race. This final chapter will examine the results of the present study within the framework of the current literature on emotional understanding and emotional research. Limitations to this study, as well as future directions, will also be discussed.

Given the results of the present study, preschoolers appear to understand the emotions of others similarly, regardless of their racial background. Specifically, preschool participants did not appear to differentiate between understanding the emotions of someone of their same racial background compared to someone of another racial background. This tendency towards understanding others' emotions similarly did not change depending on the type of emotion involved. In addition to examining the accuracy of emotions, preschoolers ascribed the intensity of emotions similarly regardless of racial background, and the ascribing of emotions did not depend on the type of emotion. When not considering the racial component of understanding emotions, the overall accuracy in matching emotions with scenarios and the determination of emotional intensity was differentiated by the type of emotion. Preschoolers found happy emotions the most easily identifiable and perceived them to be the most intense emotions. In contrast, angry emotions were the most difficult to

identify and the least intense emotion in comparison to other negative emotions as fear and sadness. These findings fit with the general theory of emotional development and understanding proposed by Denham (1998) and Mayer and Salovey (1997).

While no significant differences were found for understanding emotions and their intensity based on different racial backgrounds, this finding is not adverse nor is it unwelcome. If at this early age emotions were differentiated by race, this may have negative implications for cross-cultural relationships and social interactions between majority group and minority group members. In examining impact of race on understanding emotions and the ascribing of emotional intensity, these research questions take an exploratory perspective, because little research has considered the role of race and cultural in understanding emotions. The present findings can most likely be explained by the notion that preschool children understand others' emotional responses similarly regardless of ethnicity and race, and that any potential effects of racial differences are not a major factor at this stage of development. This supposition would thereby explain this study's lack of significant findings for a racial impact on understanding others' emotions.

In considering the finding that preschoolers understand emotions similarly regardless of race, these findings are not necessarily incongruent with the limited research on culture and emotional development. While previous research on emotions and culture have found significant differences across groups, much of these studies were conducted with other age groups (e.g., infants, older children or adults) and also examined differences across racial/ethnic groups. With past literature on emotional understanding and cultural differences, these studies typically involved between-subjects designs that explored the differences of emotional experiences and skills across

groups. In general, the understanding of emotions and its development appear to be consistent across ethnic and cultural groups (Smith, 2001; Smith & Walden, 1998). They are tied to age, cognitive language skills, and greater peer acceptance (Smith, 2001; Smith & Walden, 1998). Considering that there may be some minor differences in the sequence and rate of developing emotional understanding across national groups, children across various cultural groups (American and Japanese) were able to identify four basic emotions of happiness, surprise, sadness and anger by 7 years of age (Matsumoto & Kishimoto, 1983). While the sequential development of understanding emotions is comparable across cultures, studies do reveal important differences between cultural and ethnic groups when trying to understand emotions. The cross-cultural studies on emotional understanding have examined linguistic differences in understanding emotions (Lutz, 1985), accuracy of emotional understanding across ethnic and cultural groups cross-ethnic comparisons (Matsumoto & Kishimoto, 1983; Smith, 2001), and cross-national comparisons for emotional content in understanding emotions (Harris et al., 1987). The differences in understanding emotions can be considered in the larger context of cultural differences with emotional skills. Emotional differences across cultures include parental influence of emotional socialization (Eisenberg, 1999; Zahn-Waxler et al., 1996), emotion perception and recognition of basic and mixed emotions (Elfenbein & Ambady, 2002, 2003; Yrizzary et al., 1998), emotional expressivity (Camras et al., 1998; Zahn-Waxler et al., 1996), and cultural preferences based on gender-stereotypic characteristics (Lobel, Gruber, Govrin & Mashraki-Pedhatzur, 2001). With these substantial cultural differences in emotional situations, possible differences in emotional understanding due to race should still be considered especially at a later stage of development, despite the lack of significant findings with this study.

The limited range of studies examining culture and emotional understanding has produced a jumbled mix of findings. The dearth of research that combines emotional development and cultural/ethnic differences is clearly evident and provides little continuity, examining a range of cultural aspects and varying participants and methodologies. These studies typically consider cross-cultural and to a lesser degree cross-ethnic comparisons to understanding the possible impact of race and ethnicity. In contrast to understanding emotions across individuals and between groups, this study attempted to clarify the impact of race on intraindividual differences of understanding others' emotions. In examining how preschoolers understand others' emotions, this highlights the relational aspect of others. Understanding the emotions of others acts as a precursor to more complex emotional skills as emotional display rules and social information processing. Considering that familiarity with a culture raises accuracy and reduces response time of emotion recognition of in-group members in comparison to out-group members (Elfenbein & Ambady, 2002, 2003), a parallel link of questioning involving emotional understanding is not unreasonable. If culture can impact the accuracy of emotion understanding judgments of in-group and out-group members, the questions remains of when and at what age race and ethnicity interplay with understanding emotions. Given the results of the present study, it appears that race and ethnicity is not a factor in understanding others' emotions during the preschool years.

In terms of theoretical implications, the finding that race does not impact preschoolers' understanding of emotions does not automatically signify that race is not a factor in understanding others' emotions. The results of this study can only indicate that at an early stage of development, children appear to understand others' emotions similarly regardless of others' race. This still begs the question as to whether or not race

does have a differential impact on understanding others' emotions at some later point. While preschool children may have an awareness of racial differences and a preference for in-group members (Katz & Kofkin, 1997; Van Ausdale & Feagin, 1996), children at this age may not have acquired the unconscious racial and ethnic knowledge of stereotypical differences. Preschoolers may not be socialized with the knowledge of racial stereotypes that maintains the preference for those who are similar to one's self and the social distancing of those who are dissimilar. Perhaps it is only later in the developmental trajectory, that children develop the cognitive complexity for differentiating between cultures and how that impacts emotional understanding. With age, children become proficient with basic emotions and also begin to understand more complex emotions and concepts as mixed emotions. Perhaps cultural differences are not evident with these basic emotions, but emerge with emotions that are not clear cut and are instead ambiguous and require more interpretation. Any possible differential understanding of emotions by race may be mediated by such factors as emotional complexity, age and exposure to racial knowledge and stereotypes. Perhaps it is only with older children or adults that any impact of race may exist on understanding the emotions of others and how these individuals assign the intensity of emotions to others. This supposition could therefore explain the cultural differences in emotional skills found later in development, whereby adults differ in emotional accuracy and ascribe different emotional intensities to different racial/ethnic groups (Elfenbein & Ambady, 2002, 2003; Matsumoto, 1990).

In addition to possible theoretical implications for understanding emotions, this study raises additional research issues with the concept of understanding emotions. This study considered the understanding of emotions regardless of the individual

participant's ethnicity or their racial/ethnic context. In doing so, no consideration was given to cross-cultural examination or the comparison between different ethnic groups. As different cultures appear to respond differently with given emotional skills and situations, it would not be out of the question that different cultural/ethnic groups have a differential response to understanding others' emotions. According to Eid and Deiner (2001), individuals from different racial/ethnic groups may experience emotions differently. When compared to individualistic countries as the United States and Australia, individuals from a collectivistic culture (i.e., China) report lower intensity ratings of both positive and negative emotions (Eid & Deiner, 2001). Furthermore, in comparison to Caucasian American groups, African-American preschoolers were equally proficient in identifying basic emotions, but also were better at identifying fear in facial expression (Smith & Walden, 1998). These cross-cultural and ethnic differences in experiencing and understanding emotions may also impact the individual's understanding of emotions in relation to others who are racially or ethnically different. Intraindividual differences may exist with different expectations and stereotypes for emotions and its intensity when understanding emotions for oneself in contrast to another. Potentially, individuals from a highly individualistic and diverse culture or context may not differentiate between understanding the emotions of others who are ethnically different. In contrast, in highly collectivist and ethnically homogeneous societies or settings which have a greater social distance between racial/ethnic groups, individuals could potentially understand others' emotions differentially for those who are ethnically/racially dissimilar. An individual may perceive different levels of acceptability for emotions depending on the race or ethnicity of the individual. For example, a Chinese individual may reports lower rating of intensity of emotions for a

person of similar ethnic background, while also reporting higher rating with others of a different ethnic background. Therefore, different standards for understanding emotions and the intensity of such experiences may be made based on their racial/ethnic background or context. This highlights the importance of the participant's background as well as their ethnic environment, and how these factors may contribute to a differential understanding of emotions.

Related to the participants' cultural/racial background is the issue of acculturation and exposure to different cultures and ethnicities, particularly when discussing ethnic groups within a single diverse society as the United States. With the finding that emotion recognition accuracy and speed of its judgment is increased by in-group ethnic membership (Elfenbein & Ambady, 2002, 2003), this may run parallel to how one understands the emotions of others. The impact of culture and race may be salient not in terms of overall accuracy but in the latency and time for decision-making. How implicit is the understanding of others' emotions? Is the rate of understanding immediate when relating to others who are similar, versus protracted when trying to understand the emotions of others who are racially different? Perhaps the forced choice response to understanding emotional scenarios is not sufficient enough in determining an impact of race or ethnicity. In addition to considering different methods of emotional understanding judgments, alternative methods for collecting judgments on the intensity of emotions must also be considered. With the present study, perceptions of intensity were solely dependent on the context of the situation. Instead, perceptions and judgments of how intense emotions may also involve multiple components, such as a reliance on voice, facial expressions, context, or all of these combined. Given that the complexity of making judgments of emotional intensity can be based on multiple

alternatives, this adds to the complexity of a possible racial/ethnic impact on determining how intense an emotion is. The complexity of understanding others' emotions can involve a range of components, as the different aspects of emotional understanding and intensity racial/ethnic background of the participant interact.

While the understanding of others' emotions can involve a complex host of issues, the results of the present study does have some practical and positive implications. As the results of the study found no differential impact of race on the understanding of others' emotions and how emotional intensity is ascribed, this promises a positive perspective on relationships between races and ethnicities. If preschoolers did understand emotions differently based on racial membership, this may contribute to an emotional and social distance among various majority and minority groups. Differential thinking that particular races and ethnicities experience emotions differently and perhaps more intensely can facilitate stereotypical thinking and the divisive belief that all individuals are not equal. Believing that others are inherently different can damage interracial relationships and instead add to the racial divide. As racial differences in understanding emotions are not self evident at such an early age, this bodes well for the future even if race is a factor for later understanding of emotions. If a differential understanding of emotions did exist, it could be conceived as a response learned later in an individual's development rather than in the early years. If that is true, later differences in understanding emotions based on race could promise better results for remediation and intervention.

In addition to examining a potential racial impact on understanding emotions and the assignment of emotional intensity, this study also serves as a replication of general findings related to preschoolers' understanding of emotions. Preschooler's

accuracy in identifying emotions from emotion-eliciting scenarios is consistent with previous research on emotion perception, in which happiness is the most easily identifiable emotion in contrast to negative emotions (Bullock & Russell, 1985; Camras & Allison, 1985). In addition, similar to emotional understanding research that involves common scenarios that elicit emotions, study results parallel previous findings that preschoolers have greater accuracy in interpreting happy and sad situations, rather than other negative emotion-eliciting scenarios (Denham & Couchoud, 1990; Fabes, Eisenberg, Nyman & Michealieu, 1991). Error frequencies show that preschoolers rarely confuse happiness with negative emotions. However, in contrast to the supposition that fear is the most difficult emotion to understand in contrast to six other basic emotions (Brody & Harrison, 1987), the results of this study indicate that anger was the most difficult emotion to understand. While these findings appear to be conflicting, it is not entirely incongruous considering that there is some relative difficulty in distinguishing among negative emotions other than sadness. This parallels the development of emotion recognition skills, whereby children first understand discrepancies between positive and negative valence emotions (i.e., happy versus not happy) and then increase their accuracy in perceiving negative emotional situations that involve sadness, anger, and fear (Bullock & Russell, 1985; Camras & Allison, 1985; Denham & Couchoud, 1990; Fabes Eisenberg, Nyman & Michealieu, 1991; Philippot & Feldman, 1990; Walden & Field, 1982). Therefore, other negative emotions will have some overlap in the extent to which they are accurately distinguished from one another. This relates to the finding that error frequencies for situations that arouse anger are typically replaced with reports of sadness. Intuitively, it is not surprising that anger is one of the more difficult emotions to understand, since this emotion may not be considered the most socially

acceptable response in contrast to other emotions. This may also relate to this study's finding that anger aroused the least amount of emotional intensity, and may reflect a societal value that more intense shades of anger are undesirable. In fact Matsumoto (1990) found evidence that displays of anger are assigned to lower status individuals and reflect some inappropriateness relative to other emotions. The assignment of emotional intensity and the ability to identify certain negative emotions more accurately than other negative emotions at this stage of development may depend heavily on the child's context or level of motivation (Denham & Couchoud, 1990). Difficulties in identifying a particular emotion and determining its intensity may be due to a lack of exposure to that emotion and its causes for preschool children (Denham & Zoller, 1990). Denham and Couchoud (1990) also propose that in a given situation, negative emotions such as anger and sadness may be appropriate depending on the interpretation and emphasis of the individual. Emotional interpretations may inherently be an individual trait of how emotions are expressed in the social world. While there may be some minor differences in the sequence and rate of developing understanding of particular negative emotions, overall the general guidelines of recognizing and understanding positive-negative emotions prior to a more complex range of emotions appears to hold true.

#### *Limitations of the Study and Future Directions*

This study's results indicate that preschool children understand others' emotions equally regardless of racial membership. While it provides much needed data related to cultural differences in emotional development, it is important to consider several factors when evaluating these findings and the conclusions that can be drawn from the data.

As previously mentioned, the method for measuring accuracy of emotional

understanding and its intensity was limited to a forced-choice response. It did not take into consideration other methods as response time and the ease in which such decisions are made. Given that responses could be differentiated by the speed of processing such emotional information (Elfenbein & Ambady, 2002, 2003), the lack of utilizing a reaction time response could be considered a limitation of the study. In addition to evaluating the outcomes for emotional understanding and intensity, one must also consider the methodology itself. The stimuli used in these emotion scenarios were highly specific to a particular situation, and may call into question the emotional purity of the scenario for a given situation. However, these scenarios were used from previous studies that had piloted its vignettes with adults who agreed upon the emotional content of the scenario. Each scenario may appropriately elicit more than one type of negative response, depending on the interpretation and emphasis of the individual. While these scenarios were taken from previous studies that had piloted its vignettes with adults for agreement on emotional content, these vignettes were not piloted with children and thus may call into question the appropriate emotional response for a given scenario. Also in focusing on contextual cues, children were presented with stories that involved a fictional character in a situation that elicits an emotional reaction. In everyday life, the understanding of others' emotions involves the interaction of multiple cues from facial expressions, body language and tone of voice in addition to contextual cues. Within the limits of this study, the method of understanding emotions was restricted to the presentation of emotional stories that were limited and static in its information. Story content was primarily neutral in relation to culture and did not involve distinct cultural contexts. Furthermore, prompting with pictures of ethnic minority children may not be sufficient in activating schemas related to race and ethnicity. The use of these pictures

were also determined to be the examiner as being emotionally neutral, and would have benefited from piloting to ensure that there was no impact by the children's facial expression on the response choices. The current methodology may have only examined superficial relationships based on inspection of a picture, and may have required additional exposure to the racial aspect of the study (e.g., cartoon drawings with ethnically diverse children). However, these additional components also add a degree of artificiality and distance from perceiving real ethnic minority children.

In examining external validity and the degree to which these results may be generalized to the general population, the findings of this study do have some limitations in that regard. Without consideration given to the racial or ethnic background of study participants, cross-cultural and between-subjects comparison are not possible. In consolidating majority/minority group status and only examining in-group membership, it is not possible to examine any potential differential experiences of various ethnic and racial groups. Various majority and minority groups may be exposed differently to other cultures. Majority group individuals are often exposed to their culture, while minority group individuals are exposed to not only their own culture but also that of the majority group. This differential experience may have some impact on not only interracial relationships but potentially the emotional understanding of others who are ethnically/racially different. The setting of the participants may also be a key component to a racial/ethnic impact on understanding emotions. With this study, the participants were in a diverse setting in contrast to a homogeneous setting which may impact relations with minority groups. Having information on participants' demographic background provides a more realistic perspective and a context to clarifying how particular groups understand emotions for others who are different.

In addition to considering the demographics and the diversity of the setting, the general setting of the study must also be taken into consideration. The study participants belonged to a laboratory preschool that carries out a distinctive educational philosophy that emphasizes openness and collaboration. This type of collaborative environment can be highly positive in emotional content, with the recognition of anger being less salient. In such an environment, negative emotions, particularly anger, may not be considered socially acceptable and thus impact children's responses. Therefore, the responses of the participants must be considered in light of their unique educational context, potentially impacting the external validity of the study results. In addition to increasing external validity and generalizability, the study was limited in its sample size (N=28) and primarily involved females. In increasing the sample size and correcting the gender imbalance, a more thorough investigation could consider important factors as gender, age, and racial/ethnic background of the participant.

Despite these limitations, the present study does provide important indications regarding children's' ability to understand the emotions of others during the preschool years. This should be helpful for future researchers who wish to examine the role of culture and race/ethnicity in how children understand emotions. Future directions for research efforts in examining the impact of culture on emotional understanding need to clearly specify the role of culture in the following ways: a) within in the individual in contrast to others; b) across time and developmental periods; c) across different racial/ethnic groups (cross-national versus cross-ethnic groups); and d) across different contexts of gathering emotional knowledge information (media of facial expressions, voice, posture). Without such a systematic examination, a clear understanding of culture's impact on emotional understanding will elude researchers. It is particularly

critical to examine a longitudinal perspective to understand the progressive development of understanding emotions. In addition, since emotional understanding is considered to be a key component of later and more complex emotional skills as social information processing (Lemerise & Arsenio, 2002), it is particularly crucial to consider this foundational skill in relationship to other emotional skills, such as emotional display rules. Individuals are socialized with unique racial and ethnic knowledge and particular expectations and stereotypes of appropriate and inappropriate emotions and behaviors. It is important to examine how individuals relate to and understand others and their emotional perspective from a developmental perspective, since this may illuminate when broader issues of ethnic knowledge and stereotypes play a more prominent role. It is a given that racial and ethnic stereotypes exist, characterizing some groups as being more or less emotional or intense in their emotional expression. As such, this stereotypical knowledge can have some effect on how others relate to each other, as well as possible behavioral implications. Therefore, it is important to clarify the relationship between race/ethnicity and emotional skills, if one was to even attempt to understand its social interplay with interracial relationships. Given that preponderance of findings that relate emotional understanding and other emotional skills to concurrent and later social competence (Denham, et al., 2002; Diamond, 2001; Eisenberg & Fabes, 1995; Field & Walden, 1982, 1990; McDowell, O'Neil & Parke, 2000; Nowicki & Duke, 1992; Shields et al., 2001), the question remains regarding what role culture and ethnicity plays with both concepts. Prior to examining complex interracial interactions, it is important to clarify the role of the individual by gaining a clear understanding of the individual's emotional perspective, abilities, and motivations and how this may potentially impacts

one's behavior. Only with such a clear and strategic effort would it be possible to understand the role of culture with emotional understanding and other emotional skills.

## Appendices

Appendix A. Story Characters' Names

	Female	Male
<i>Asian</i>	Lang	Kazu
<i>African American</i>	Takisha	Jaden
<i>Caucasian</i>	Jenny	Tom

## Appendix B. Emotional Vignettes as Stimuli

### Emotion Vignettes for Happiness

- 1) Mary loves ice cream. Mary got to eat ice cream after school (Denham & Couchoud, 1990; Smith & Walden, 1998).
- 2) It is Mary's birthday. She is given a party with lots of cake, and fun games to play, and presents too (Garner et al., 1994; Camras & Allison, 1985; Pollack et al., 2000).
- 3) At Christmas, Mary got a new toy that she wanted (Garner et al., 1994; Pollack et al., 2000).
- 4) Mary's favorite animal is the panda. She and her family went to the zoo to see the new pandas (adapted from Denham & Couchoud, 1990 and Pollack et al., 2000).
- 5) Mary liked story time. Today, her teacher read to the class Mary's favorite story (adapted from Harris, 1983).
- 6) Mary wanted her friends to come over to play. So she asked them, and they came to play with her at her house (Pollack et al., 2000).

### Emotion Vignettes for Afraid

- 1) David was dreaming about a monster in his nightmare (Garner et al., 1994; Pollack et al., 2000).
- 2) When David went to bed, he thought there was something in his closet trying to get him (Pollack et al., 2000).
- 3) David was walking through the woods and met a hungry bear who liked to eat little children (Garner et al., 1994; Pollack et al., 2000).
- 4) David and his mother went to the grocery store, but he got separated from his mother. David was lost. (adapted from Michalson & Lewis, 1984).
- 5) David is being chased by a lion and thinks he cannot get away (Camras & Allison, 1985).
- 6) David didn't like the basement. It is very dark and he thinks that there are monster living there (based on Stein & Levine, 1999).

### Emotion Vignettes for Sadness

- 1) Mary couldn't play a game very well, and some of the kids laughed at her (Garner et al., 1994; Pollack et al., 2000).
- 2) Mary had a pet bird. This morning, she left the door open to the bird cage, and her bird flew away (adapted from Michalson & Lewis, 1985; Saarni, 1997).
- 3) Mary left her favorite toy at someone else's house. Mary couldn't get the toy for a long time. (Reichenbach & Masters, 1983).
- 4) Mary has a pet dog. The dog is sick and going to die (Pollack et al., 2000)
- 5) Mary's friend who she really liked to play with moved away. She can't play with her anymore (Pollack et al., 2000).
- 6) Mary's dad had to go away for a business trip. He was going to be gone for a long time (adapted from Hughes et al., 1998; based on Stein & Levine, 1999).

### Emotion Vignettes for Angry

- 1) David's little brother broke his favorite toy on purpose (Pollack et al., 2000).
- 2) David was building a big tower of blocks. Another naughty boy came along and knocked it over (adapted from Garner et al., 1994; Michalson & Lewis, 1984).
- 3) David let his best friend use his new ball. His friend wasn't careful and lost the ball and wouldn't give David another one (Garner et al., 1994; Pollack et al., 2000; Saarni, 1997).
- 4) David doesn't like spinach, but David's mother would not let him leave the dinner table until he finished eating them (adapted from Denham & Couchoud, 1990).
- 5) At snack time, David's neighbor stole his snack (based on Stein & Levine, 1999).
- 6) David was playing by himself. His neighbor comes up and punches him for no reason (based on Stein & Levine, 1999).

Appendix C. Order Of Story Presentation  
and Participant-Character Ethnicity Match

All possible orders of ethnic match to character	All possible orders of emotions
Same, Other1, Other 2 Other1, Other2, Same Other2, Same, Other1 Same, Other2, Other1 Other1, Same Other2 Other2, Other1, Same	H, Sc, Sa, M Sc, Sa, M, H Sa, M, H, Sc M, H, Sc, Sa Sc, Sa, H, M Sa, H, M, Sc H, M, Sc, Sa M, Sc, Sa, H Sa, M, Sc, H M, Sc, H, Sa Sc, H, Sa, M H, Sa, M, Sc M, H, Sa, Sc H, Sa, Sc, M Sa, Sc, M, H Sc, M, H, Sa H, M, Sa, Sc M, Sa, Sc, H Sa, Sc, H, M Sc, H, M, Sa M, Sa, H, Sc Sa, H, Sc, M H, Sc, M, Sa Sc, M, Sa, H

## Glossary

*Culture* can be conceived of as a “set of traditional, explicit and implicit beliefs, values, actions and material environments that are transmitted by language, symbol and behavior within an enduring and interacting group of people” (Saarni, Mumme & Campos, 1998).

*Emotional intelligence* comprises of the “ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997).

*Emotional knowledge or understanding* entails the ability to “label emotions and recognize relations among the words and the emotions themselves” (Mayer & Salovey, 1997).

*Knowledge of emotional situations or situation knowledge* is the “understanding of context and events that are likely to provoke certain feeling states” (Garner et al., 1994).

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